

## CHAPTER 4

### POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE CANEY FORK RIVER WATERSHED

#### 4.1 Background.

#### 4.2. Characterization of HUC-10 Subwatersheds

4.2.A. 0513010801 (Caney Fork River)

4.2.B. 0513010802 (Bee Creek)

4.2.C. 0513010803 (Cane Creek)

4.2.D. 0513010804 (Caney Fork River)

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4.2.G. 0513010807 (Falling Water River)

4.2.H. 0513010808 (Caney Fork River)

4.2.I. 0513010809 (Smith Fork Creek)

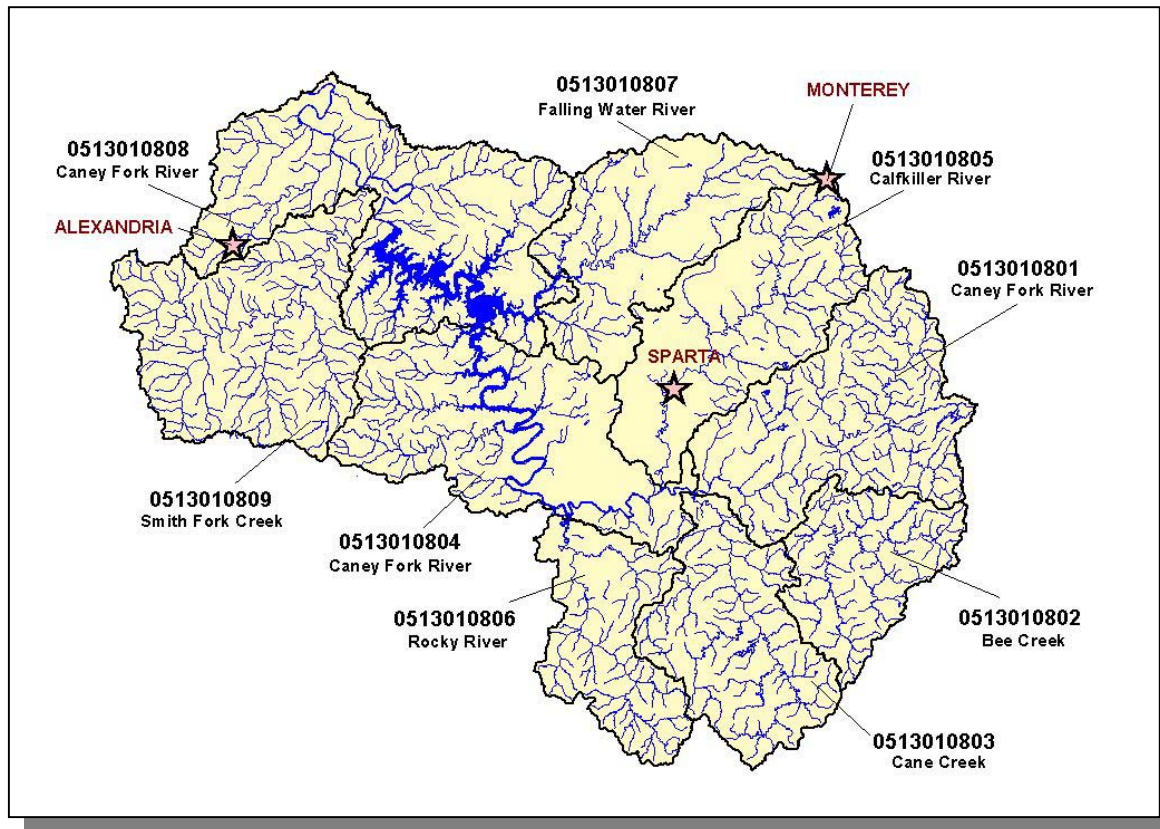
**4.1. BACKGROUND.** This chapter is organized by HUC-10 subwatershed, and the description of each subwatershed is divided into four parts:

- i. General description of the subwatershed
- ii. Description of point source contributions
  - ii.a. Description of facilities discharging to water bodies listed on the 1998 303(d) list
- iii. Description of nonpoint source contributions

The Caney Fork River Watershed (HUC 05130108) has been delineated into nine HUC 10-digit subwatersheds.

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 1.1 beta (developed by Tetra Tech, Inc for EPA Region 4) released in 2000.

WCS integrates with ArcView® v3.2 and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 1992 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.



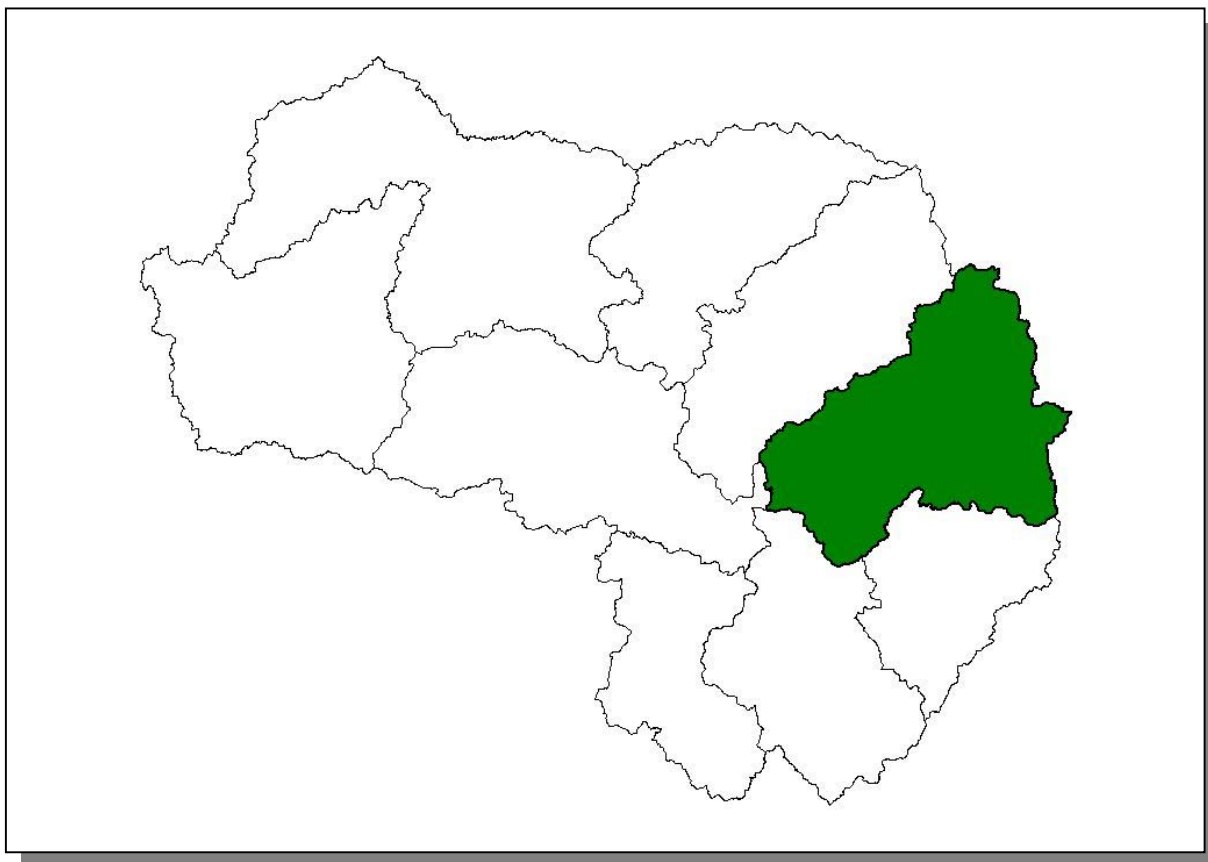
**Figure 4-1. The Caney Fork River Watershed is Composed of Nine USGS-Delineated Subwatersheds (10-Digit Subwatersheds). Locations of Alexandria, Monterey, and Sparta are shown for reference.**

**4.2. CHARACTERIZATION OF HUC-10 SUBWATERSHEDS.** The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize each subwatershed in the Caney Fork River Watershed.

HUC-10	HUC-12	
0513010801	051301080101 (Caney Fork River)	051301080103 (Caney Fork River)
	051301080102 (Laurel Creek)	051301080104 (Caney Fork River)
0513010802	051301080201 (Bee Creek)	051301080203 (Bee Creek)
	051301080202 (Glade Creek)	
0513010803	051301080301 (Upper Cane Creek)	051301080303 (Lower Cane Creek)
	051301080302 (Piney Creek)	
0513010804	051301080401 (Caney Fork River)	051301080405 (Caney Fork River)
	051301080402 (Caney Fork River)	051301080406 (Fall Creek)
	051301080403 (Sink Creek)	051301080407 (Eagle Creek)
	051301080404 (Pine Creek)	
0513010805	051301080501 (Upper Calfkiller River)	051301080503 (Middle Calfkiller River)
	051301080502 (Bridge Creek)	051301080504 (Lower Calfkiller River)
0513010806	051301080601 (Rocky River)	051301080602 (Rocky River)
0513010807	051301080701 (Upper Falling Water River)	051301080704 (Cane Creek)
	051301080702 (Middle Falling Water River)	051301080705 (Taylor Creek)
	051301080703 (Lower Falling Water River)	
0513010808	051301080801 (Center Hill Lake)	051301080805 (Caney Fork River)
	051301080802 (Center Hill Lake)	051301080806 (Caney Fork River)
	051301080803 (Mine Lick Creek)	051301080807 (Hickman Creek)
	051301080804 (Center Hill Lake)	051301080808 Mulherrin Creek)
0513010809	051301080901 (Smith Fork Creek)	051301080904 (Clear Fork)
	051301080902 (Saunders Fork)	051301080905 (Dry Creek)
	051301080903 (Smith Fork Creek)	051301080906 (Smith Fork Creek)

**Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages.** NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.

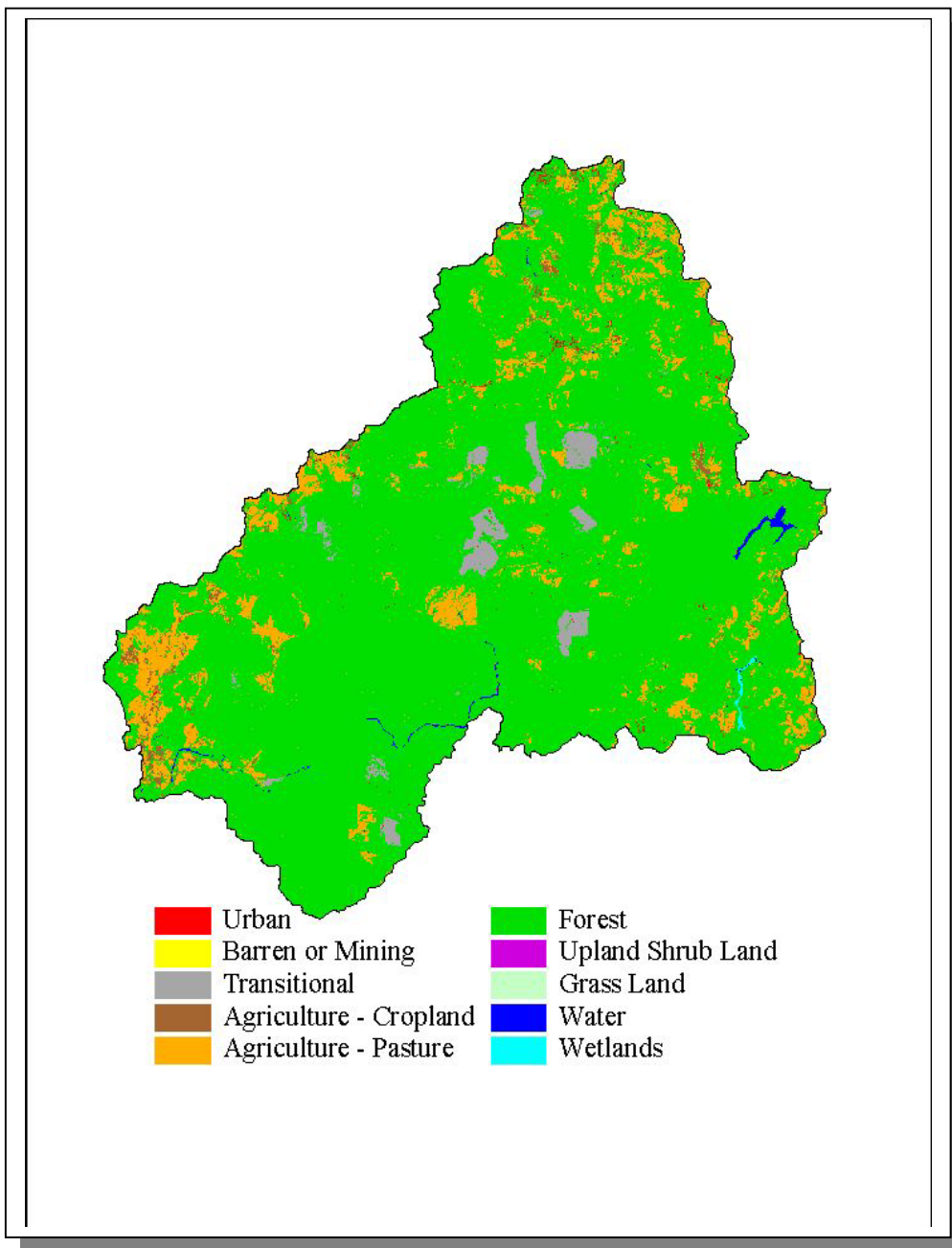
**4.2.A. 0513010801.**



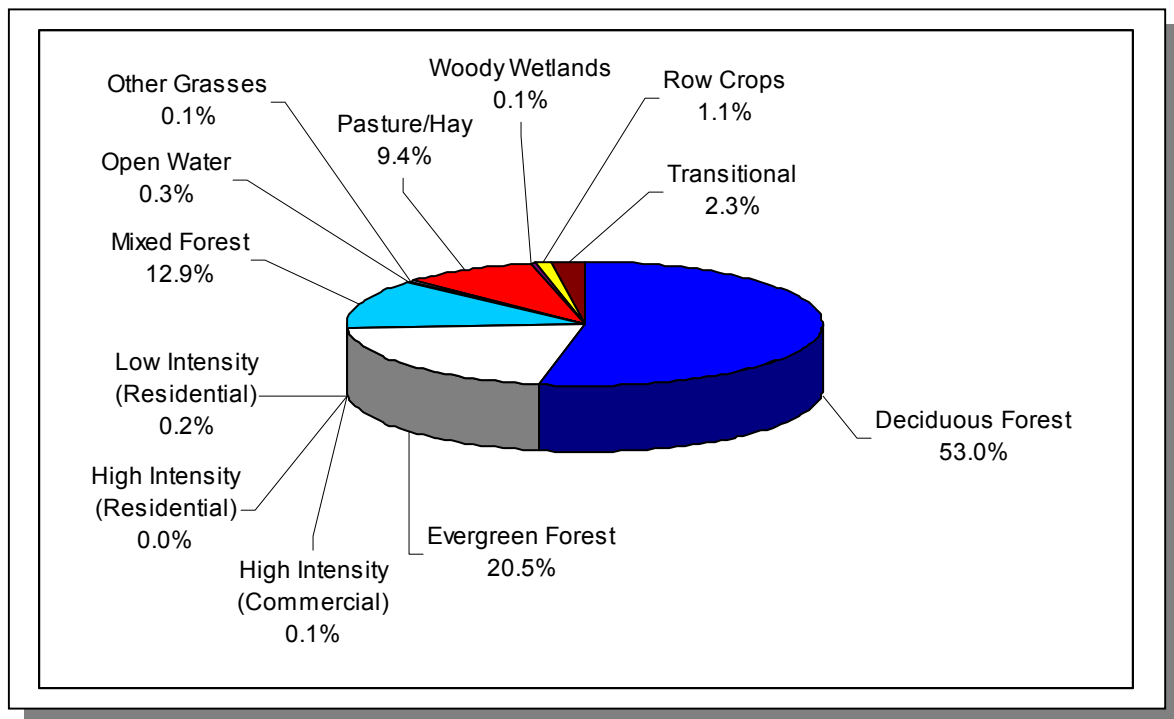
**Figure 4-2. Location of Subwatershed 0513010801.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.



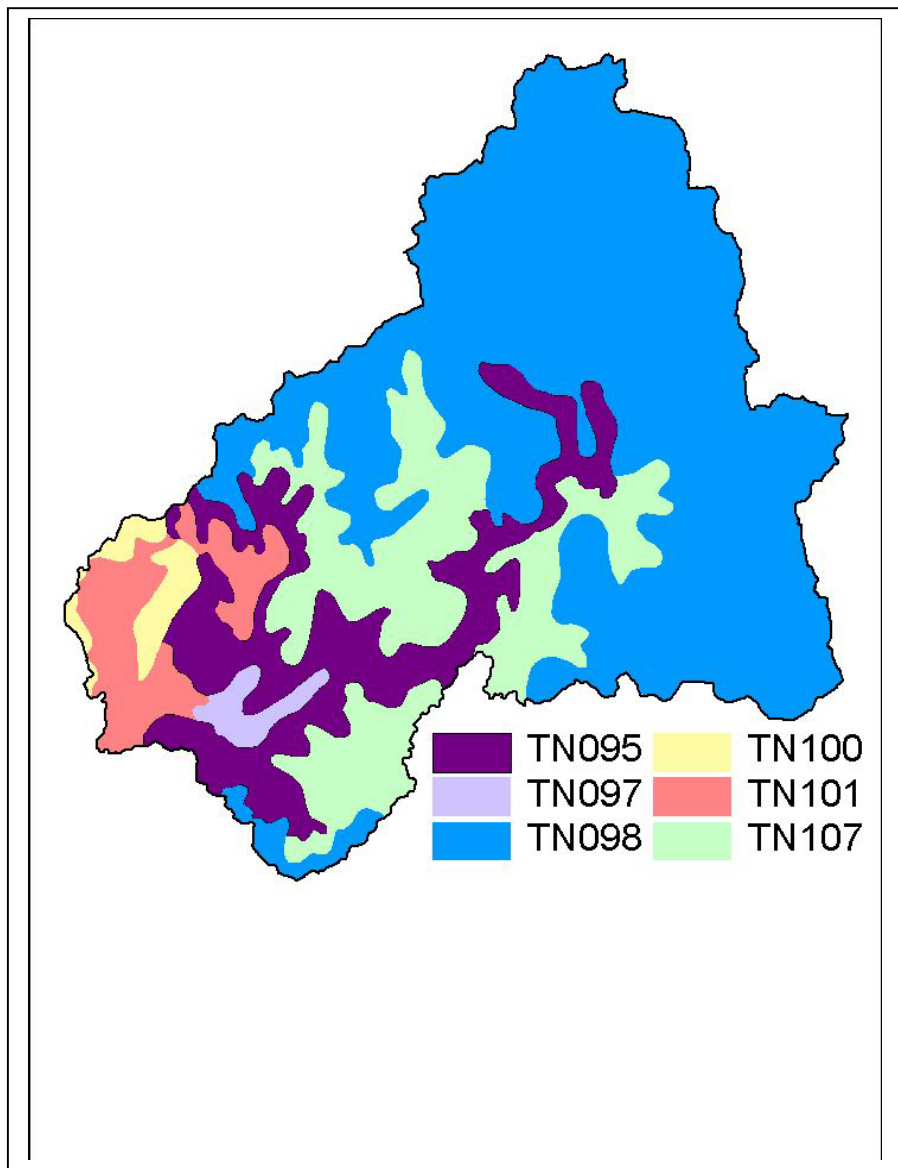
**4.2.A.i. General Description.**



**Figure 4-3. Illustration of Land Use Distribution in Subwatershed 0513010801.**



**Figure 4-4. Land Use Distribution in Subwatershed 0513010801.** More information is provided in Caney Fork-Appendix IV.



**Figure 4-5. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010801.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN097	0.00	B	1.62	5.55	Loam	0.32
TN098	1.00	C	3.98	4.82	Loam	0.32
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35
TN107	1.00	C	6.34	4.84	Loam	0.28

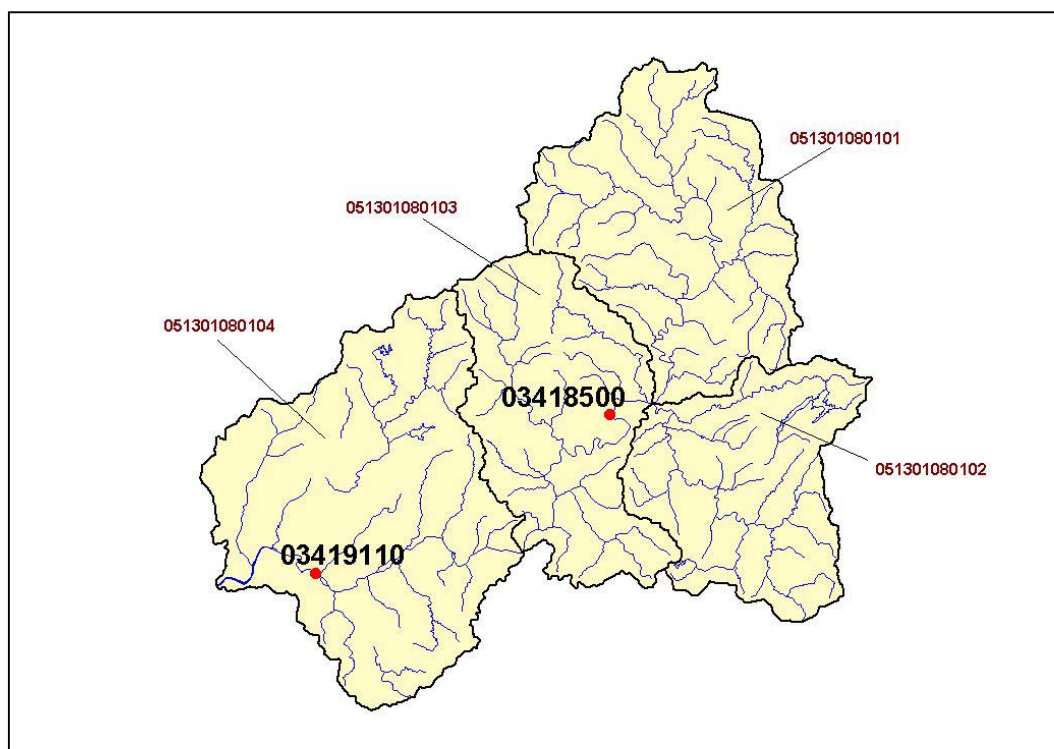
**Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010801.** More details are provided in Caney Fork-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Cumberland	34,736	43,217	16.82	5,842	7,269	24.4
Putnam	51,373	58,326	0.15	78	89	14.1
Van Buren	4,846	5,060	6.03	292	305	4.5
White	20,090	22,201	25.04	5,031	5,560	10.5
<b>Totals</b>	<b>11,045</b>	<b>128,804</b>		<b>11,243</b>	<b>13,223</b>	<b>17.6</b>

**Table 4-3. Population Estimates in Subwatershed 0513010801.**

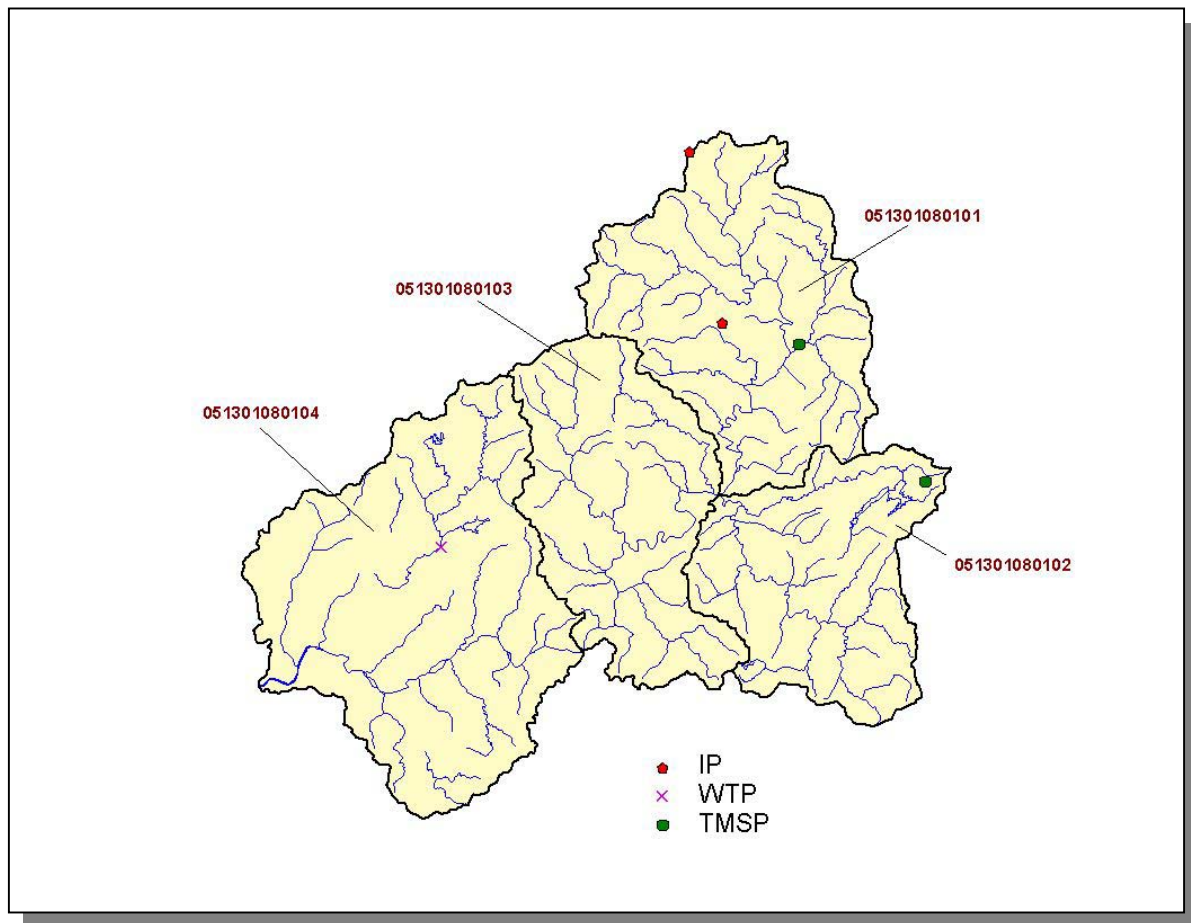
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Pleasant Hill	Cumberland	474	228	77	151	0

**Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0513010801.**

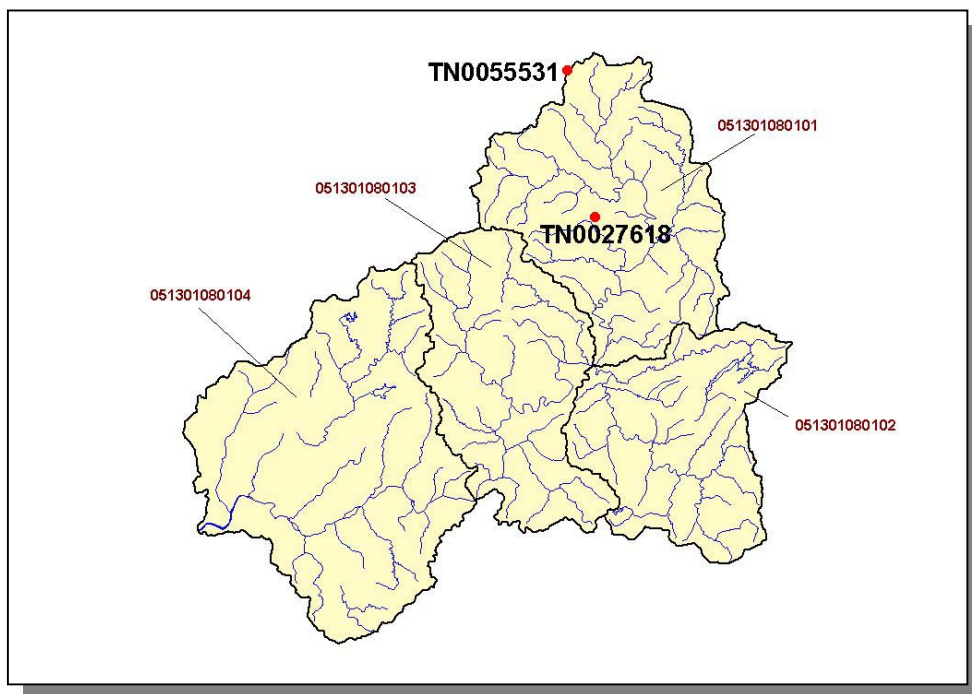


**Figure 4-6. Location of Historical Streamflow Data Collection Sites in Subwatershed 0513010801.** Subwatershed 051301080101, 051301080102, 051301080103, and 051301080104 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

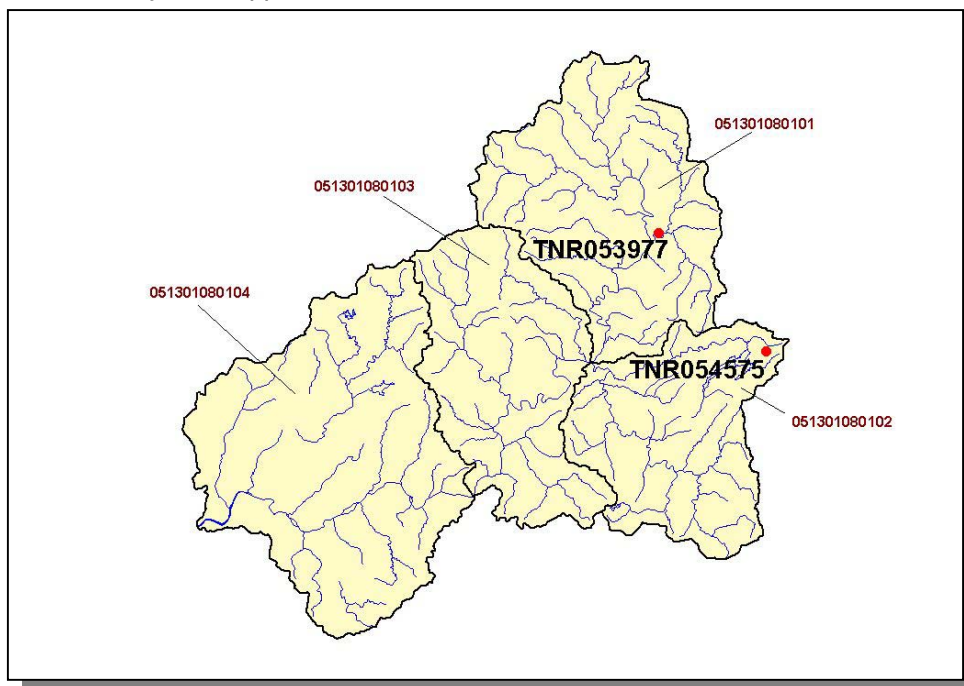
**4.2.A.ii** Point Source Contributions.



**Figure 4-7. Location of Active Point Source Facilities in Subwatershed 0513010801.** Subwatershed 051301080101, 051301080102, 051301080103, and 051301080104 boundaries are shown for reference. More information is provided in the following figures.

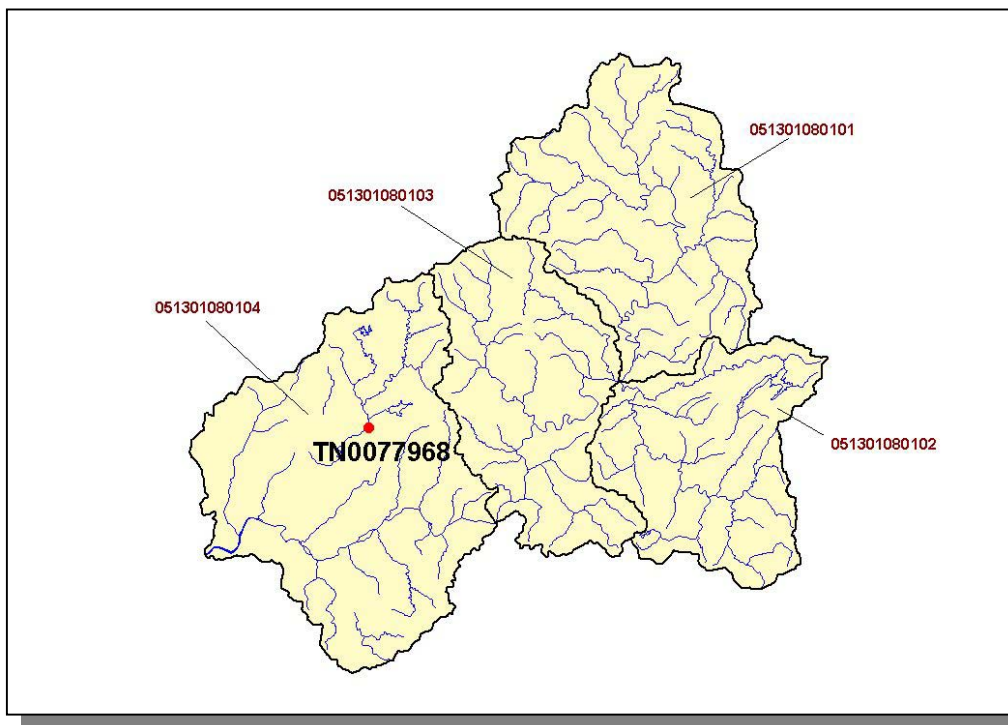


**Figure 4-8. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010801.** Subwatershed 051301080101, 051301080102, 051301080103, and 051301080104 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.



**Figure 4-9. Location of TMSP Facilities in Subwatershed 0513010801.** Subwatershed 051301080101, 051301080102, 051301080103, and 051301080104 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.





**Figure 4-10. Location of Water Treatment Plant Sites in Subwatershed 0513010801.** Subwatershed 051301080101, 051301080102, 051301080103, and 051301080104 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.



**4.2.A.iii. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
2,017	6,560	1,309	10	5,233,413	26	13

**Table 4-5. Summary of Livestock Count Estimates in Subwatershed 0513010801.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

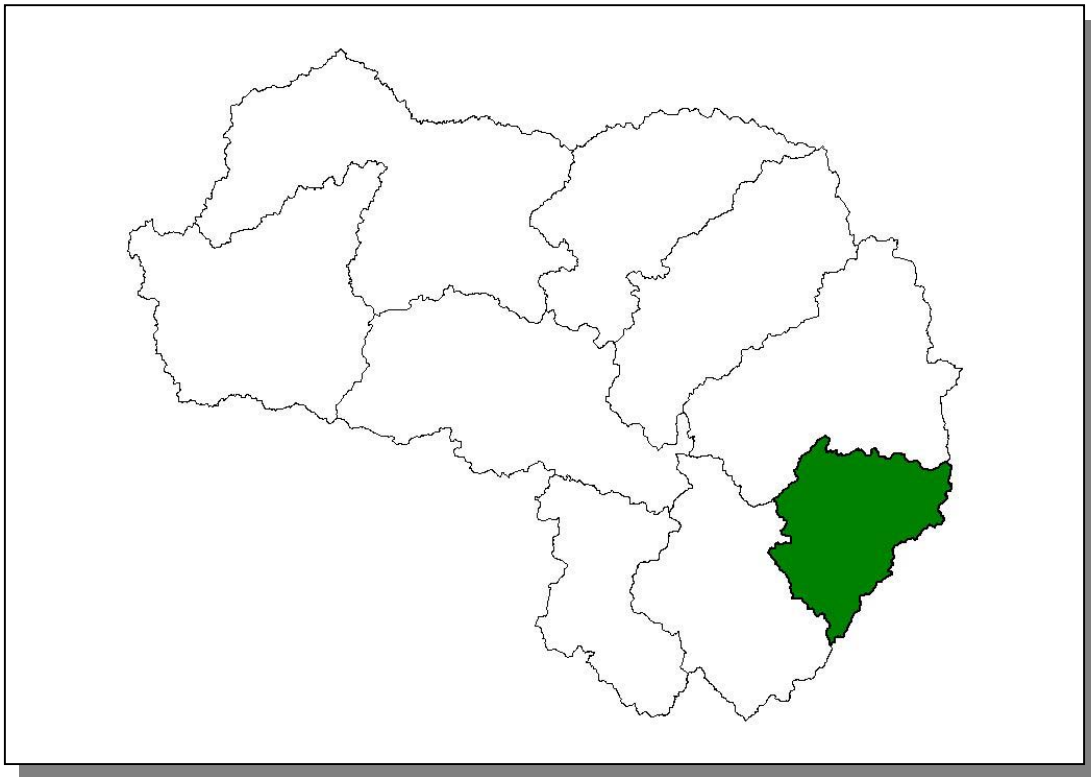
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cumberland	320.3	320.3	5.9	22.5
Putnam	152.5	152.3	3.6	16.4
Van Buren	145.0	135.4	2.3	9.5
<b>Total</b>	<b>129.4</b>	<b>129.4</b>	<b>4.9</b>	<b>23.3</b>

**Table 4-6. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0513010801.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Corn (Row Crops)	7.83
Soybeans (Row Crops)	4.11
Grass (Hayland)	0.26
Legume/Grass (Hayland)	0.14
Grass (Pastureland)	0.96
Grass, Forbs, Legumes (Mixed Pasture)	1.14
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Farmsteads and Ranch Headquarters	0.66
Nonagricultural Land Use	0.00
Conservation Reserve Program Land	0.27
Tobacco (Row Crops)	5.65
Wheat (Close Grown Cropland)	6.20
Fruit (Horticultural)	0.19
Other Cropland (Not Planted)	2.93

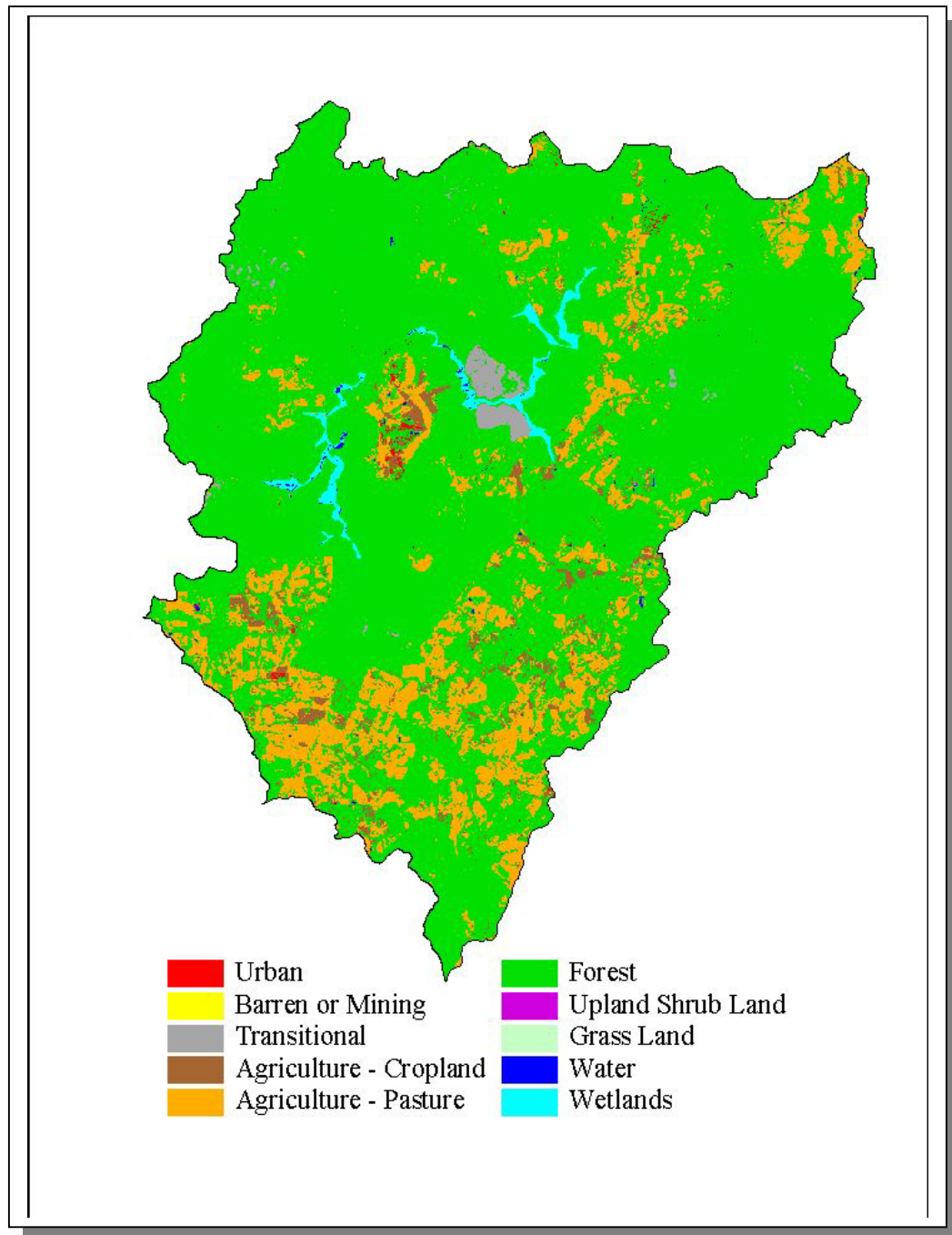
**Table 4-7. Annual Estimated Total Soil Loss in Subwatershed 0513010801.**

**4.2.B. 0513010802.**

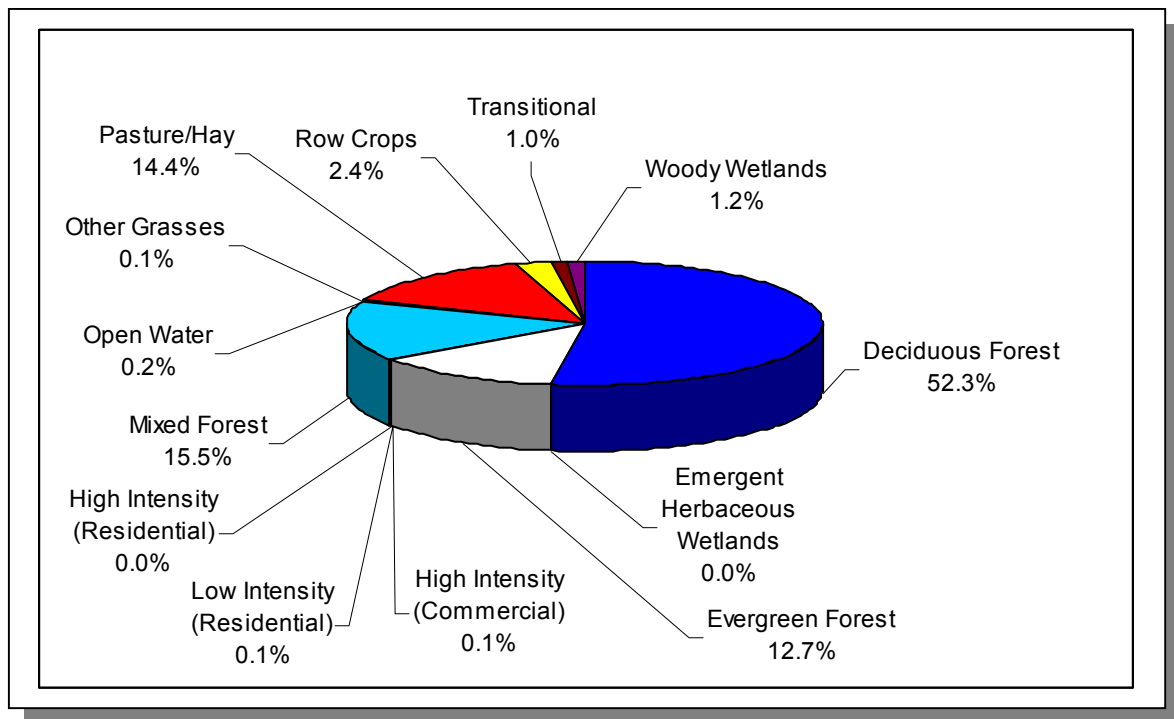


**Figure 4-11. Location of Subwatershed 0513010802.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.

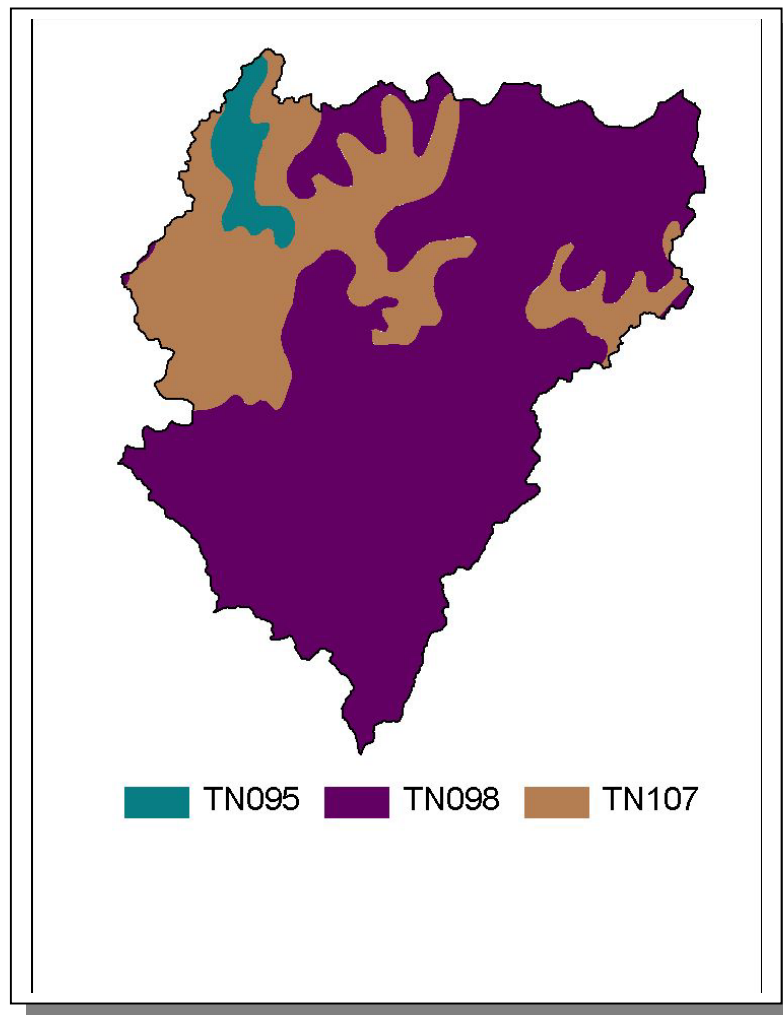
4.2.B.i. General Description.



*Figure 4-12. Illustration of Land Use Distribution in Subwatershed 0513010802.*



**Figure 4-13. Land Use Distribution in Subwatershed 0513010802.** More information is provided in Caney Fork-Appendix IV.



**Figure 4-14. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010802.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN107	1.00	C	6.34	4.84	Loam	0.28

**Table 4-8. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010802.** More information is provided in Caney Fork-Appendix IV.

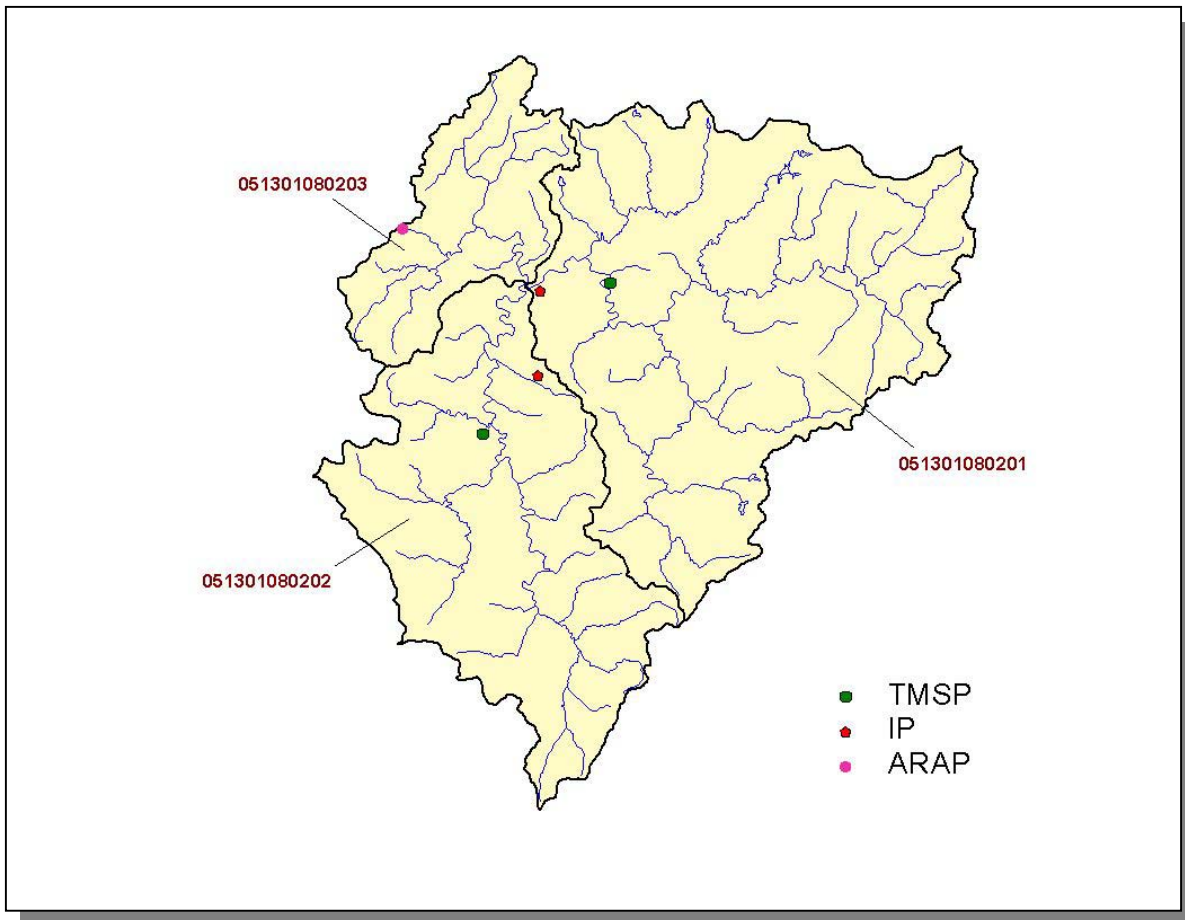
County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Bledsoe	9,669	10,650	16.62	1,607	1,770	10.1
Cumberland	34,736	43,217	3.64	1,263	1,571	24.4
Van Buren	4,846	5,060	8.44	409	427	4.4
White	20,090	22,201	0.65	131	145	10.7
<b>Total</b>	<b>69,341</b>	<b>81,128</b>		<b>3,410</b>	<b>3,913</b>	<b>14.8</b>

**Table 4-9. Population Estimates in Subwatershed 0513010802.**



**Figure 4-15. Location of Historical Streamflow Data Collection Sites in Subwatershed 0513010802.** Subwatershed 051301080201, 051301080202 and 051301080203 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

**4.2.B.ii.** Point Source Contributions.



**Figure 4-16. Location of Active Point Source Facilities in Subwatershed 0513010802.** Subwatershed 051301080201, 051301080202, and 051301080203 boundaries are shown for reference. More information is provided in the following figures.

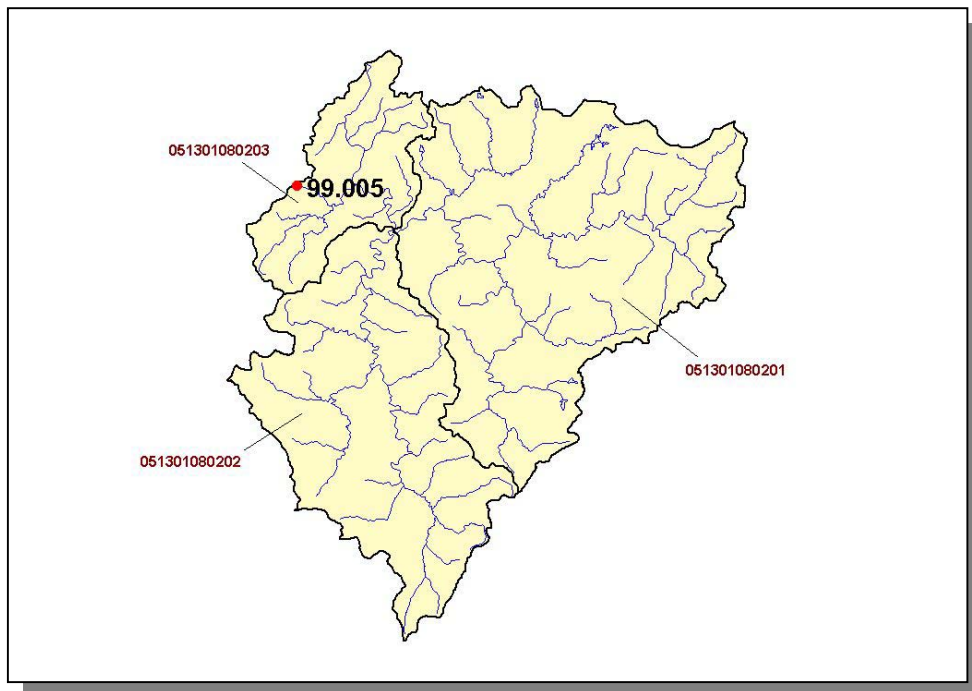




**Figure 4-17. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010802.** Subwatershed 051301080201, 051301080202, and 051301080203 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.



**Figure 4-18. Location of TMSP Facilities in Subwatershed 0513010802.** Subwatershed 051301080201, 051301080202, and 051301080203 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.



**Figure 4-19. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010802.** Subwatershed 051301080201, 051301080202, and 051301080203 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.

**4.2.B.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
3,354	7,335	469	7	0	340	57

**Table 4-10. Summary of Livestock Count Estimates in Subwatershed 0513010802.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

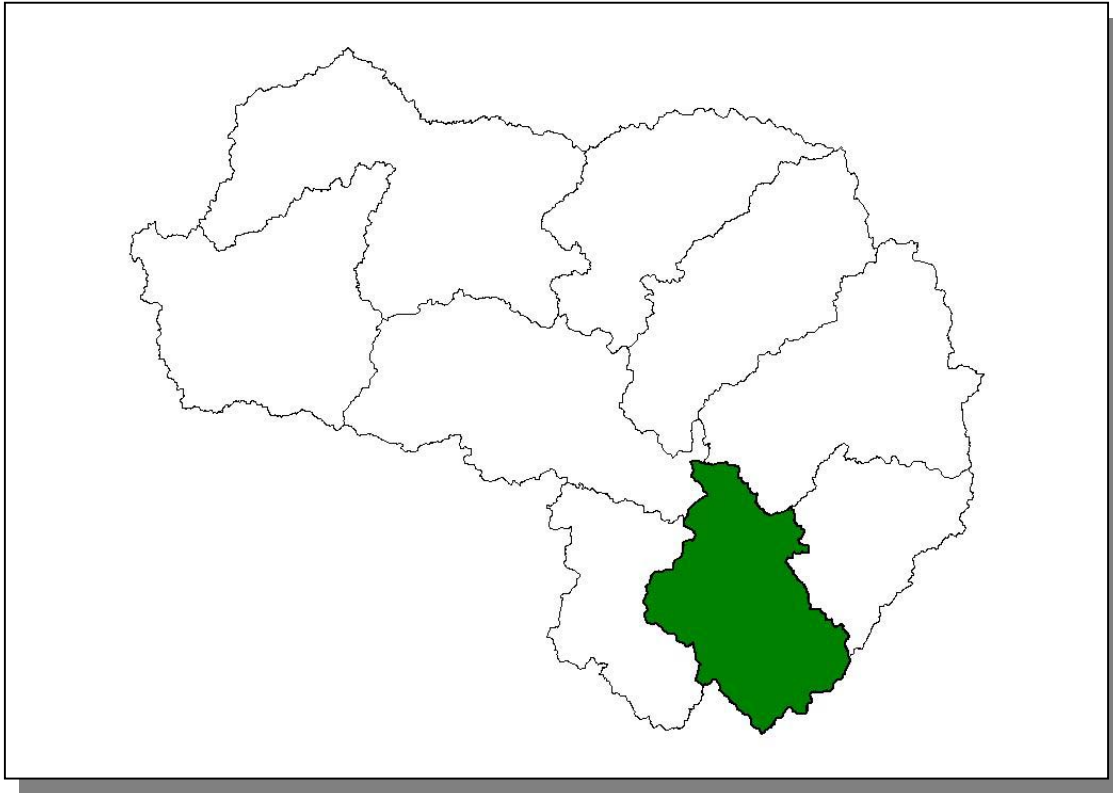
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Bledsoe	186.2	186.2	0.9	2.3
Cumberland	320.3	320.3	5.9	22.5
Van Buren	145.0	135.4	2.3	9.5
White	129.4	129.4	4.9	23.3
<b>Total</b>	<b>780.9</b>	<b>771.3</b>	<b>14.0</b>	<b>57.6</b>

**Table 4-11. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0513010802.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legume/Grass (Hayland)	0.88
Legume (Pastureland)	0.15
Legume (Hayland)	0.51
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Farmsteads and Ranch Headquarters	0.92
Non Agricultural Land Use	0.00
Corn (Row Crops)	9.29
Soybeans (Row Crops)	5.23
Tobacco (Row Crops)	6.11
All Other Row Crops	4.45
Wheat (Close Grown Cropland)	2.93
All Other Close Grown Cropland	0.67
Grass (Hayland)	0.79
Fruit (Horticulture)	6.11
Grass (Pastureland)	0.70
Grass, Forbs, Legumes (Mixed Pasture)	0.48
Conservation Reserve Program Lands	0.97
Other Land in Farms (Other Farmland)	0.25
All Other Crops not Planted	2.26
Other Vegetable and Truck Crops	14.05
Other (Horticulture)	3.72

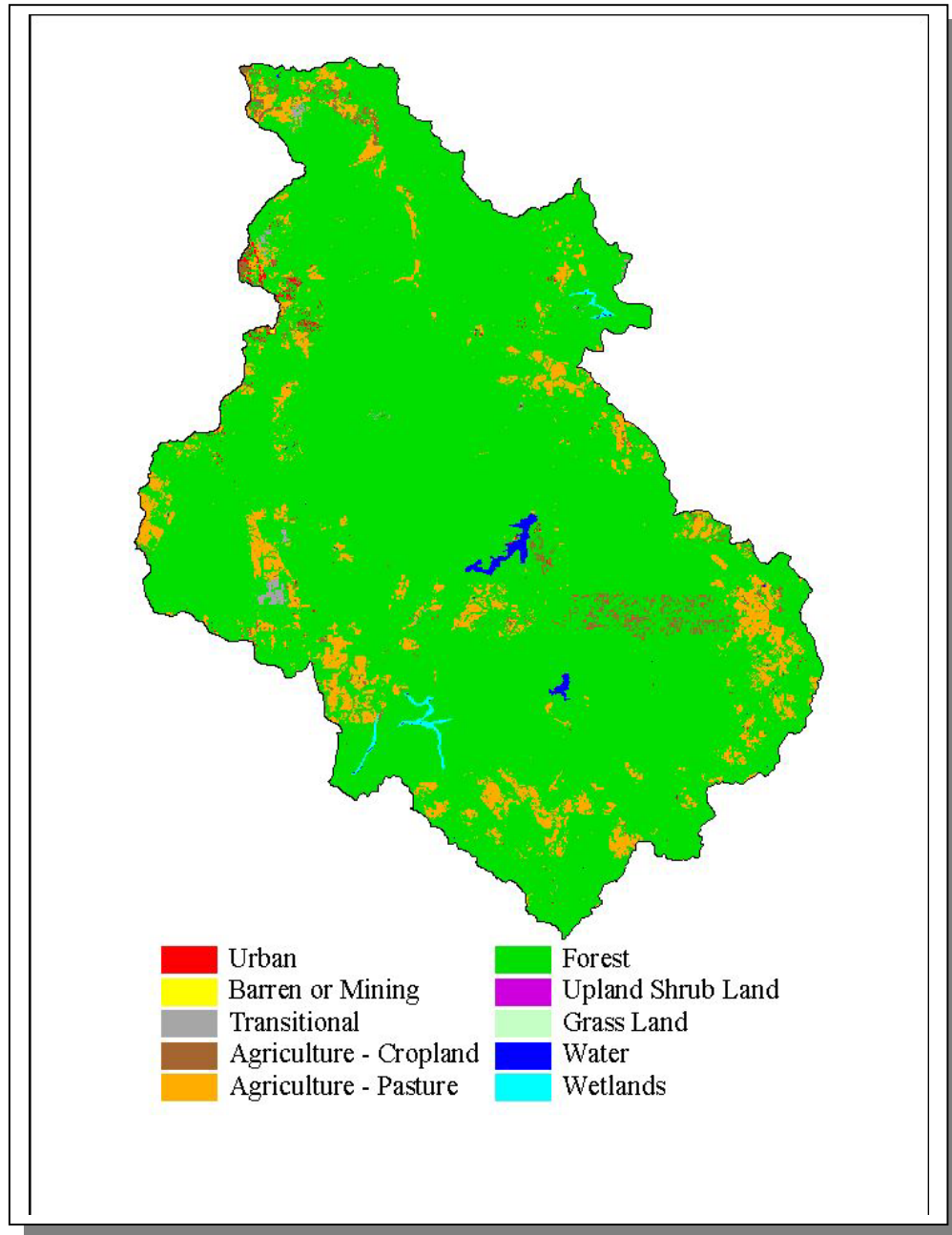
**Table 4-12. Annual Estimated Total Soil Loss in Subwatershed 0513010802.**

**4.2.C. 0513010803.**

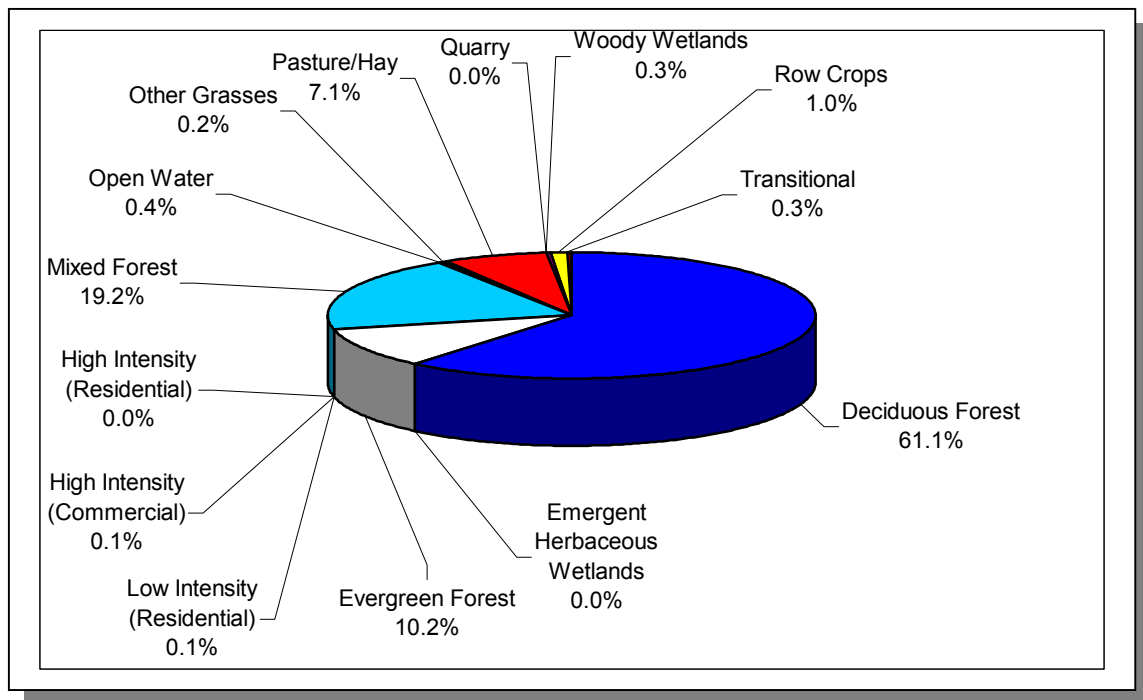


**Figure 4-20. Location of Subwatershed 0513010803.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.

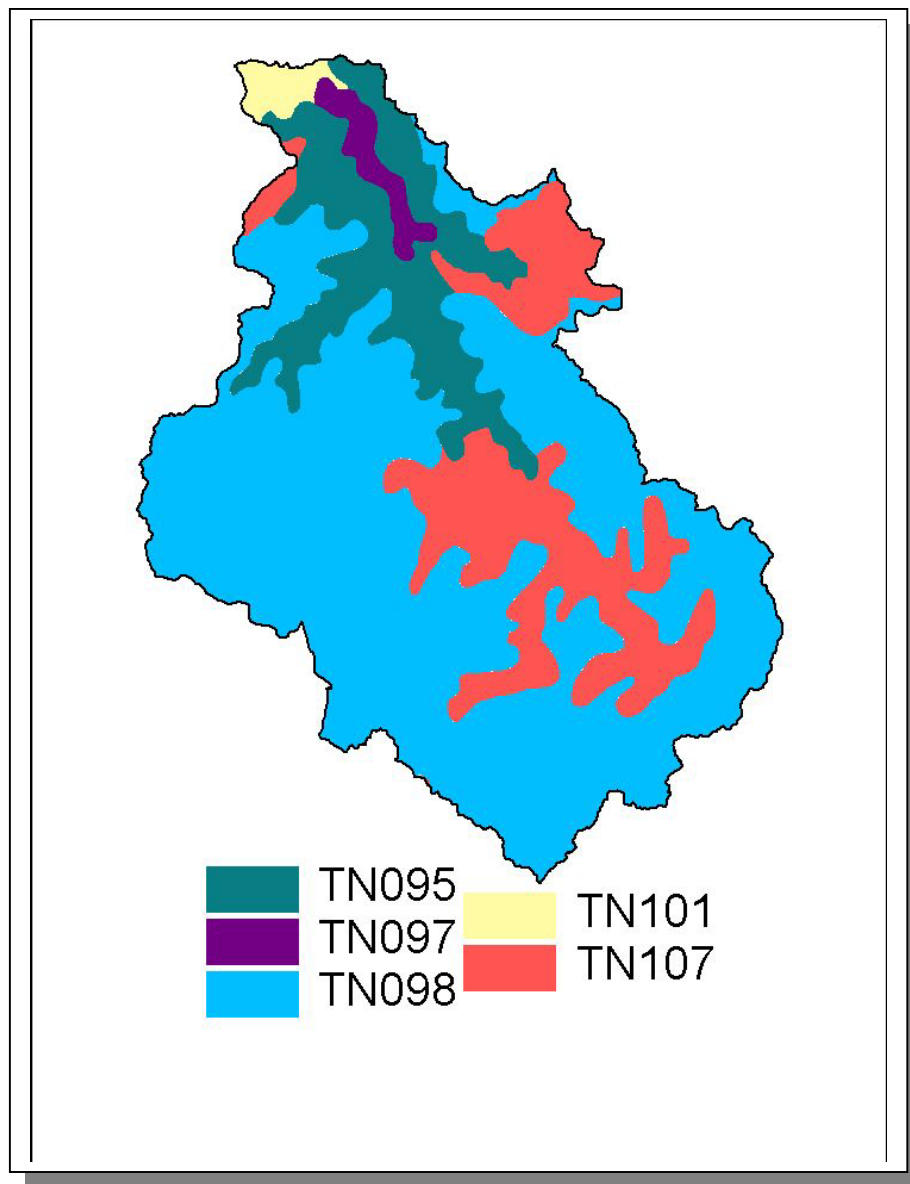
4.2.C.i. General Description.



*Figure 4-21. Illustration of Land Use Distribution in Subwatershed 0513010803.*



**Figure 4-22. Land Use Distribution in Subwatershed 0513010803.** More information is provided in Caney Fork-Appendix IV.



**Figure 4-23. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010803.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN097	0.00	B	1.62	5.55	Loam	0.32
TN098	1.00	C	3.98	4.82	Loam	0.32
TN101	0.00	B	1.71	5.39	Loam	0.35
TN107	1.00	C	6.34	4.84	Loam	0.28

**Table 4-13. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010803.** More information is provided in Caney Fork-Appendix IV.

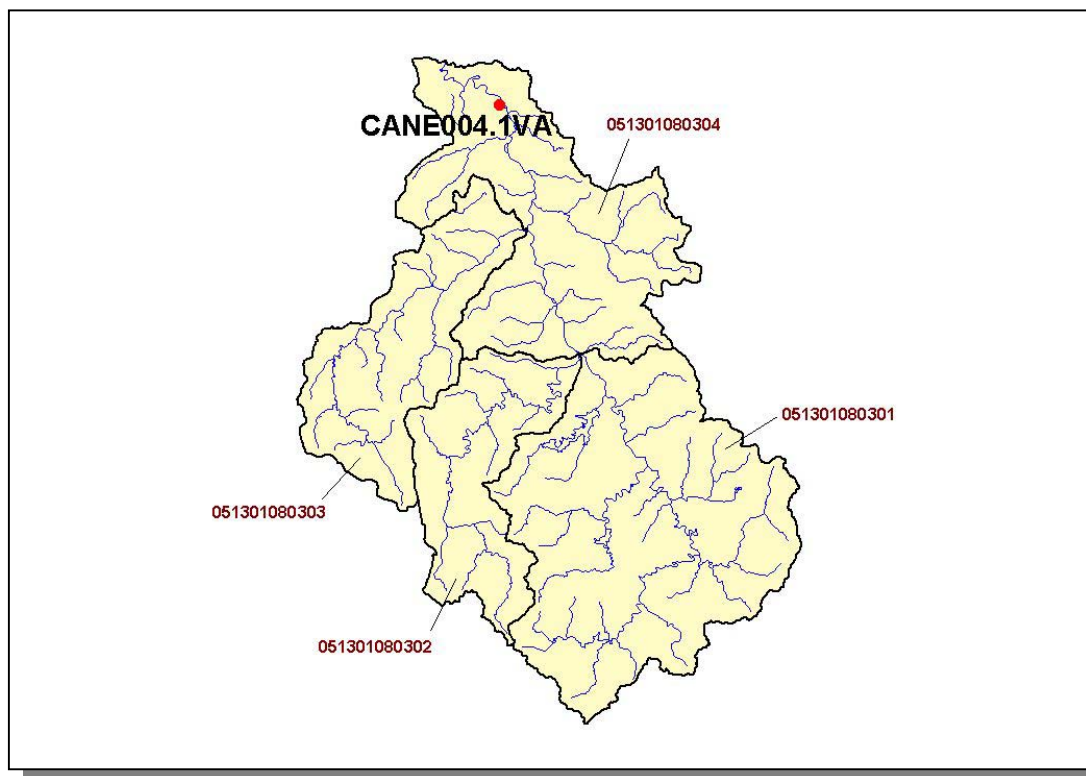


County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Bledsoe	9,669	10,650	13.26	1,283	1,413	10.1
Van Buren	4,836	5,060	43.66	2,116	2,209	4.4
<b>Total</b>	<b>14,505</b>	<b>15,710</b>		<b>3,399</b>	<b>3,622</b>	<b>6.6</b>

*Table 4-14. Population Estimates in Subwatershed 0513010803.*

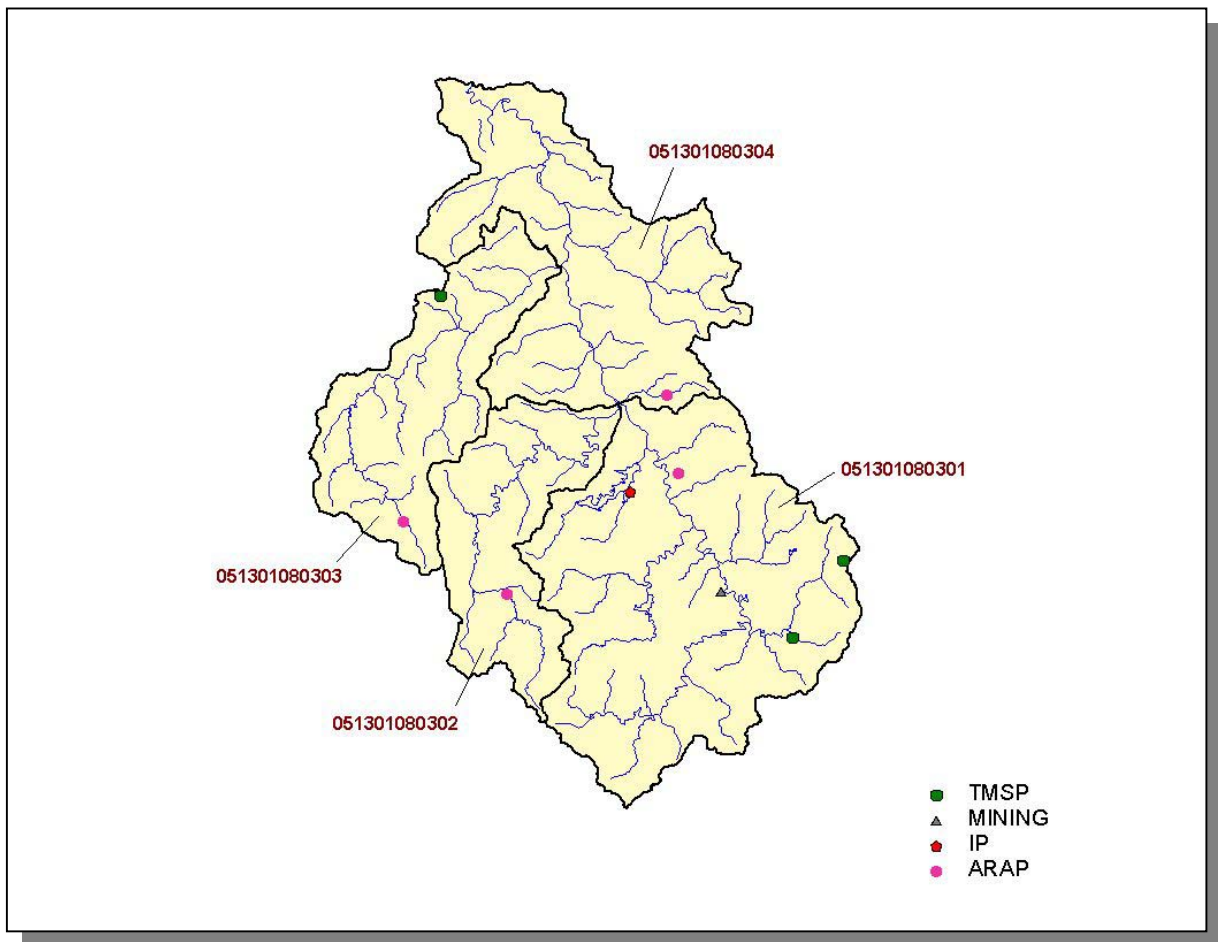
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Spencer	Van Buren	1,125	466	23	436	7

*Table 4-15. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0613010803.*

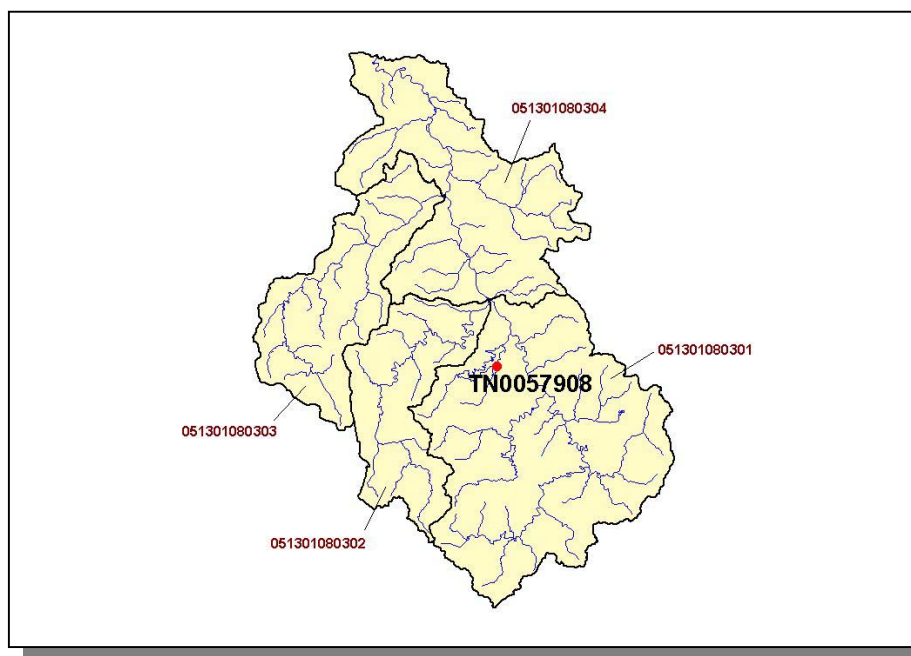


*Figure 4-24. Location of Storet Monitoring Sites in Subwatershed 0513010803. Subwatershed 051301080301, 051301080302, 051301080303, and 051301080304 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.*

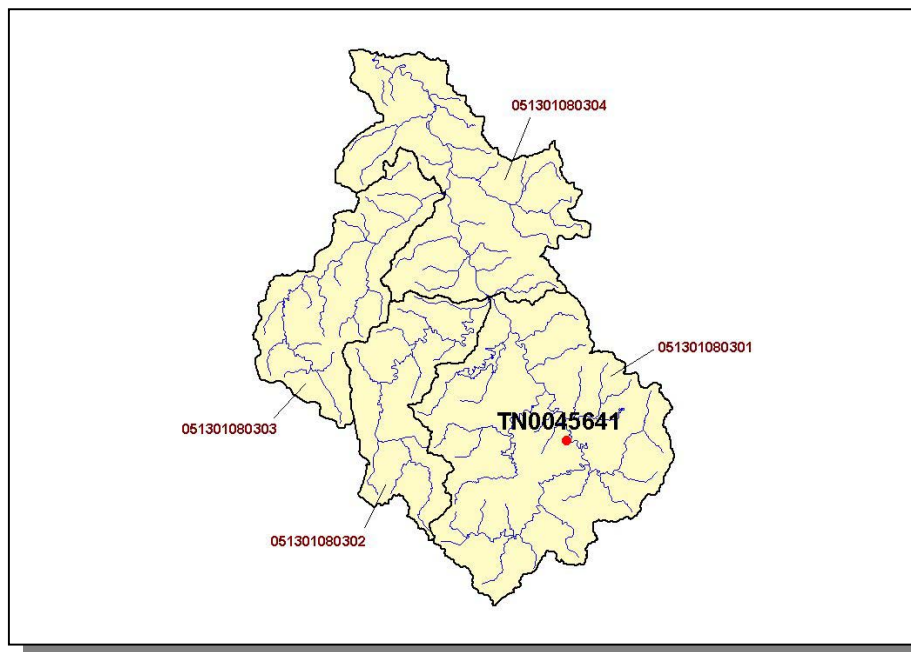
**4.2.C.ii.** Point Source Contributions.



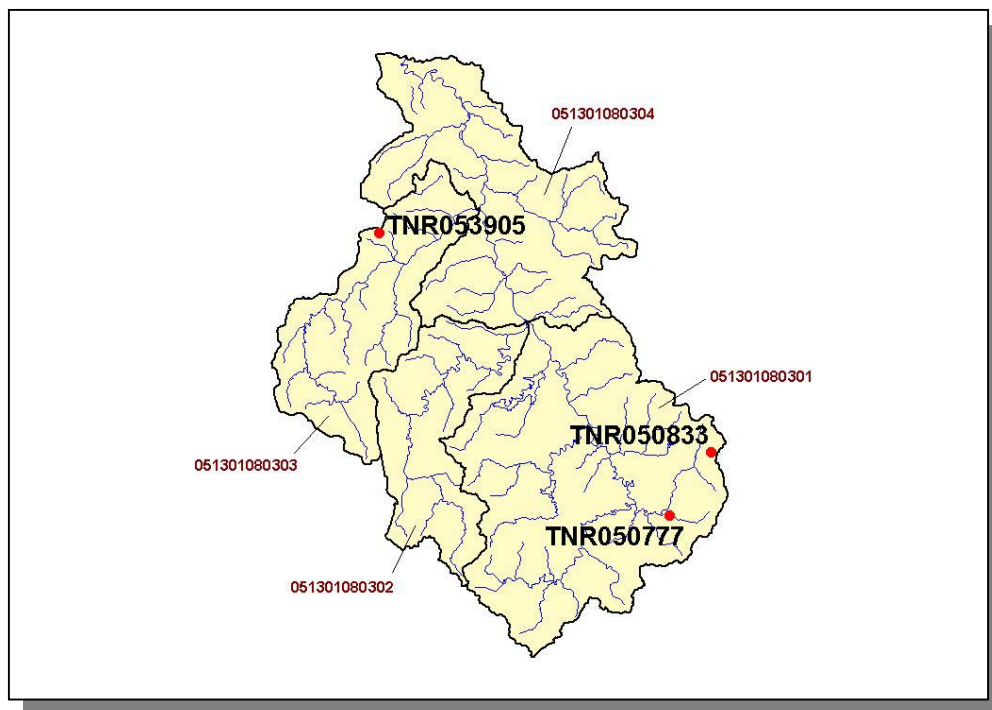
**Figure 4-25. Location of Active Point Source Facilities in Subwatershed 0513010803.** Subwatershed 051301080301, 051301080302, 051301080303, and 051301080304 boundaries are shown for reference. More information is provided in the following figures.



**Figure 4-26. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010803.** Subwatershed 051301080301, 051301080302, 051301080303, and 051301080304 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.



**Figure 4-27. Location of Active Mining Sites in Subwatershed 0513010803.** Subwatershed 051301080301, 051301080302, 051301080303, and 051301080304 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.



**Figure 4-28. Location of TMSP Facilities in Subwatershed 0513010803.** Subwatershed 051301080301, 051301080302, 051301080303, and 051301080304 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.



**Figure 4-29. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010803.** Subwatershed 051301080301, 051301080302, 051301080303, and 051301080304 boundaries are shown for reference. More information, including the names of facilities, is provided in Caney Fork-Appendix IV.

**4.2.C.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
2,291	4,918	270	<5	0	21	12

**Table 4-16. Summary of Livestock Count Estimates in Subwatershed 0513010803.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

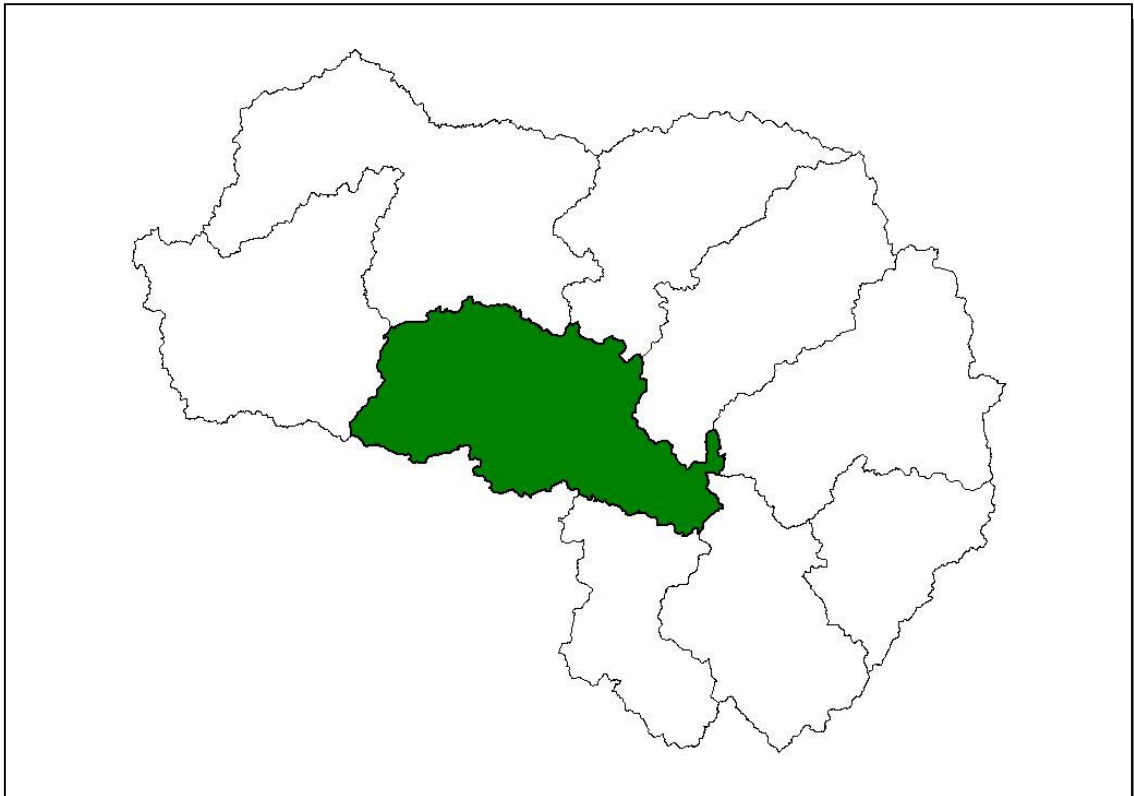
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Bledsoe	186.2	186.2	0.9	2.3
Van Buren	145.0	135.4	2.3	9.5
White	129.4	129.4	4.9	23.3
<b>Totals</b>	<b>460.6</b>	<b>451.0</b>	<b>8.1</b>	<b>35.1</b>

**Table 4-17. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0513010803.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Nonagricultural Land Use	0.00
Legume (Hayland)	0.51
Grass (Hayland)	0.18
Legume/Grass (Hayland)	1.16
Grass (Pastureland)	1.00
Grass, Forbs, Legumes (Mixed Pasture)	0.57
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Farmsteads and Ranch Headquarters	0.99
Soybeans (Row Crops)	4.85
Corn (Row Crops)	11.22
All Other Row Crops	4.45
Tobacco (Row Crops)	6.11
Wheat (Close Grown Cropland)	2.81
All Other Close Grown Cropland	0.67
Conservation Reserve Program Land	1.00
Fruit (Horticulture)	0.08
Other (Horticulture)	3.72
Other Land in Farms	0.25
Other Cropland not Planted	2.26

**Table 4-18. Annual Estimated Total Soil Loss in Subwatershed 0513010803.**

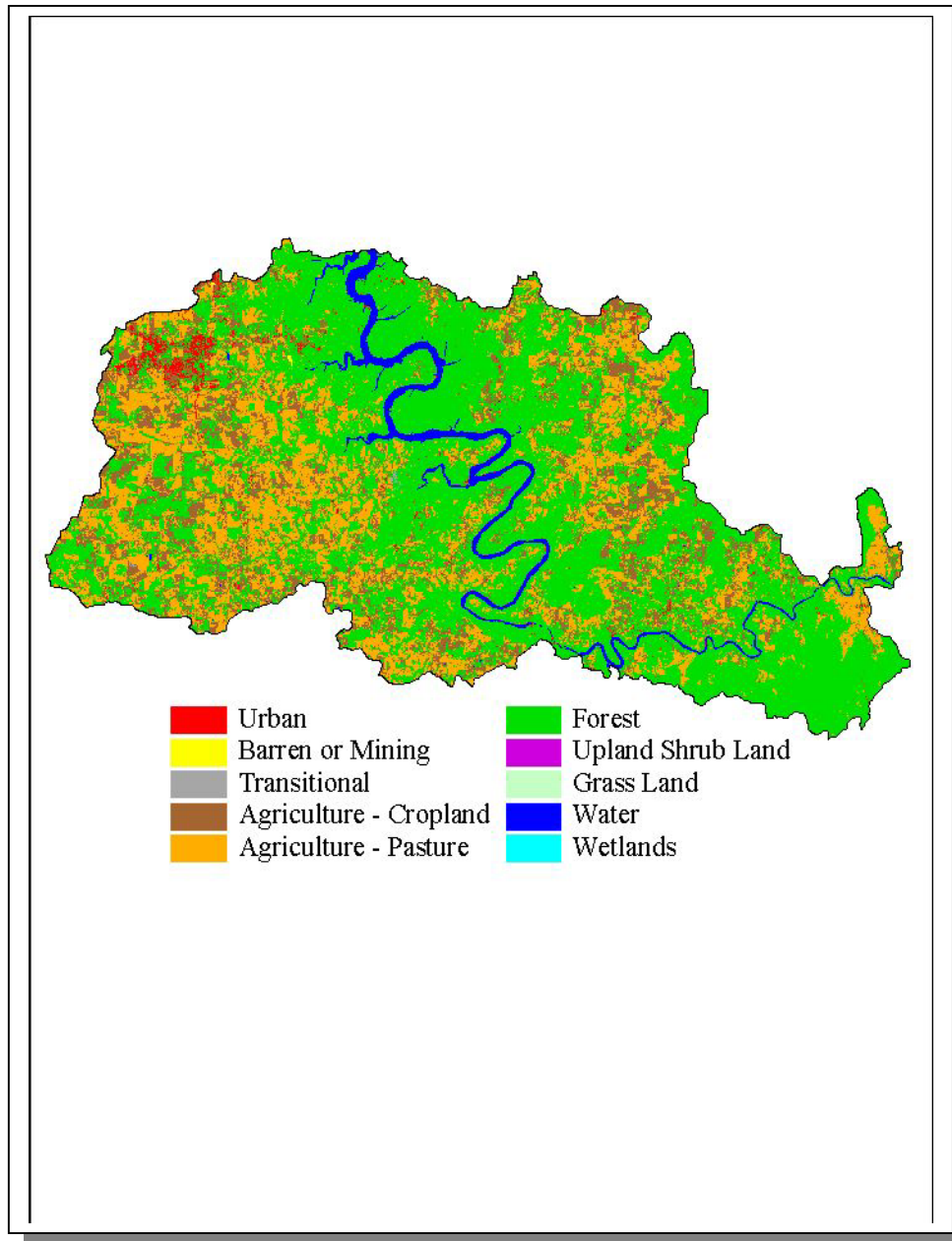
**4.2.D. 0513010804.**



**Figure 4-30. Location of Subwatershed 0513010804.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.

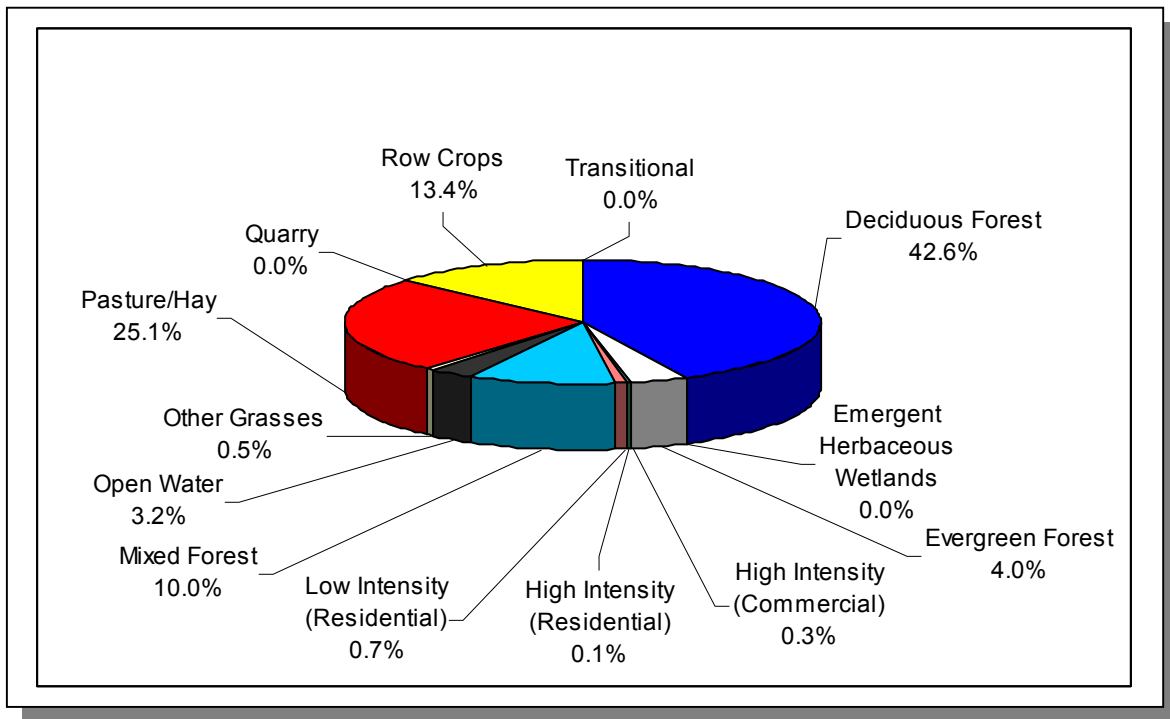


4.2.D.i. General Description.

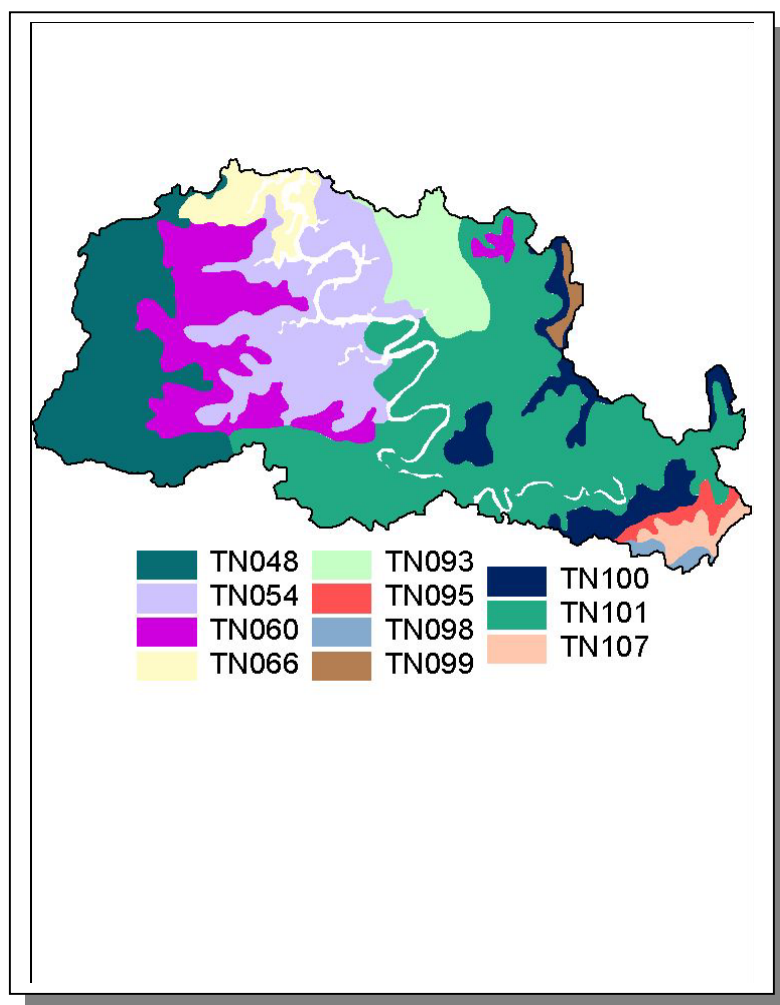


**Figure 4-31. Illustration of Land Use Distribution in Subwatershed 0513010804.**





**Figure 4-32. Land Use Distribution in Subwatershed 0513010804.** More information is provided in Caney Fork-Appendix IV.



**Figure 4-33. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010804.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN048	8.00	C	1.38	5.06	Silty Loam	0.42
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN066	0.00	B	2.62	4.75	Loam	0.28
TN093	0.00	B	2.43	4.95	Loam	0.36
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN099	1.00	B	1.65	4.98	Silty Loam	0.33
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35
TN107	1.00	C	6.34	4.84	Loam	0.28

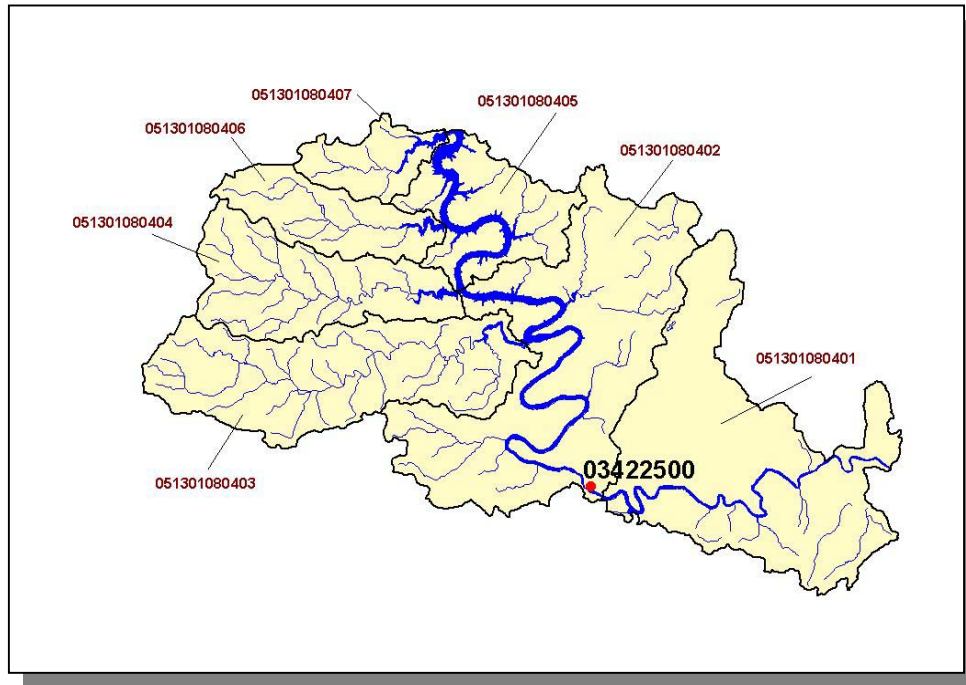
**Table 4-19. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010804.** More information is provided in Caney Fork-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Cannon	10,467	12,011	0.61	64	73	14.1
DeKalb	14,360	15,743	35.97	5,165	5,663	9.6
Van Buren	4,846	5,060	9.66	468	489	4.5
Warren	32,992	35,777	5.95	1,964	2,130	8.5
White	20,090	22,201	19.38	3,894	4,303	10.5
<b>Total</b>	<b>82,755</b>	<b>90,792</b>		<b>11,555</b>	<b>12,658</b>	<b>9.5</b>

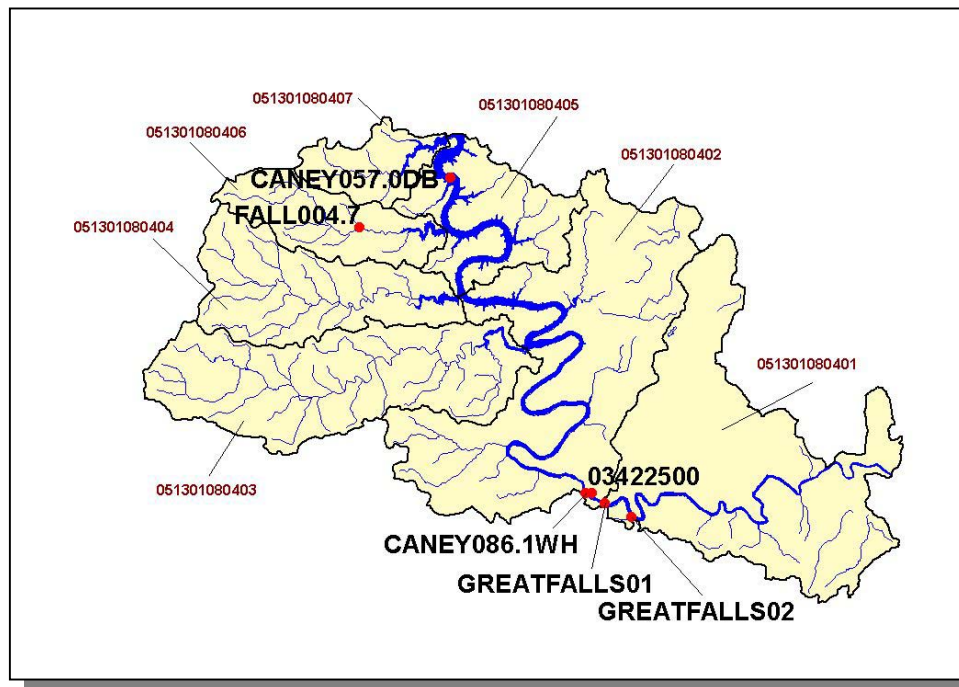
*Table 4-20. Population Estimates in Subwatershed 0513010804.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Doyle	White	359	150	10	129	11
Spencer	Van Buren	1,125	466	23	436	7
Smithville	De Kalb	3,791	1,693	1,560	122	11
<b>Total</b>		<b>5,275</b>	<b>2,309</b>	<b>1,593</b>	<b>687</b>	<b>29</b>

*Table 4-21. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0513010804.*

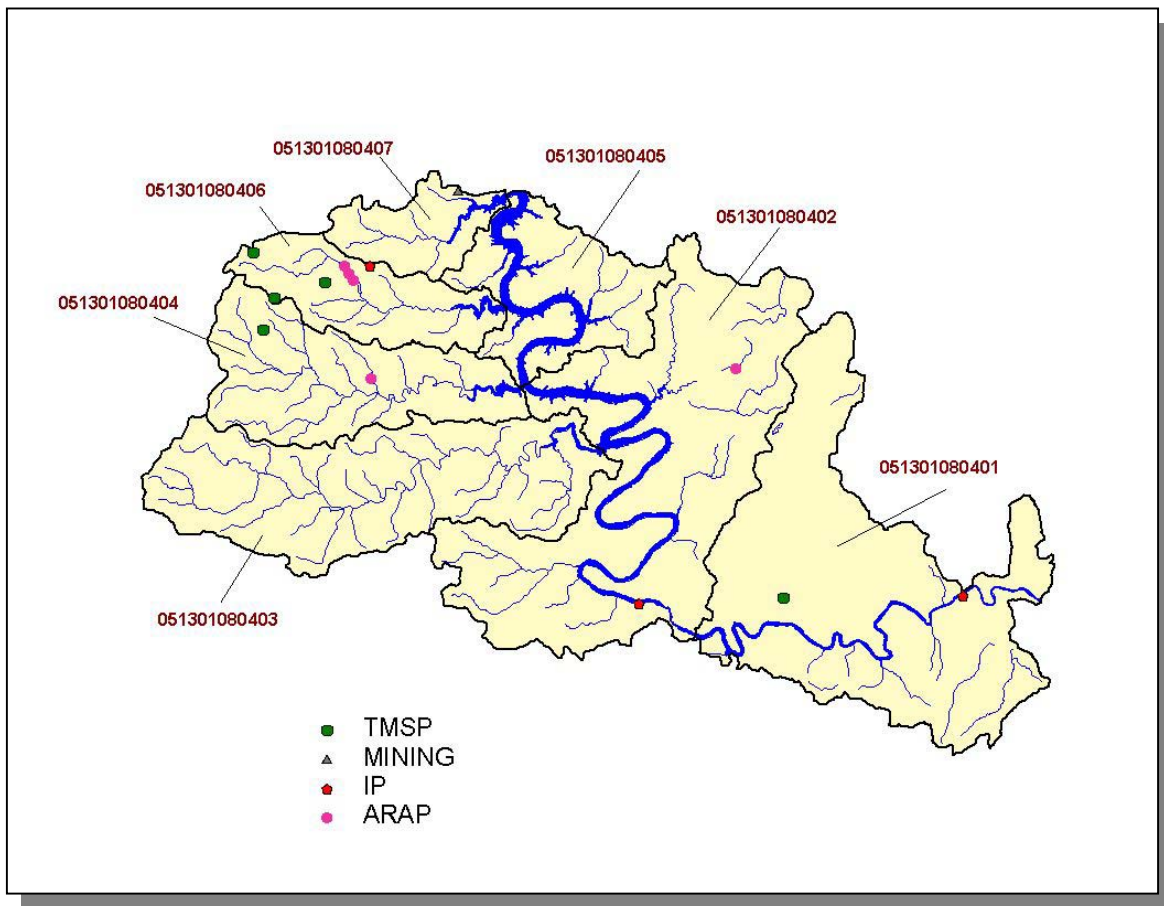


**Figure 4-34. Location of Historical Streamflow Data Collection Sites in Subwatershed 0513010804.** Subwatershed 051301080401, 051301080402, 051301080403, 051301080404, 051301080405, 051301080406, and 051301080407 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

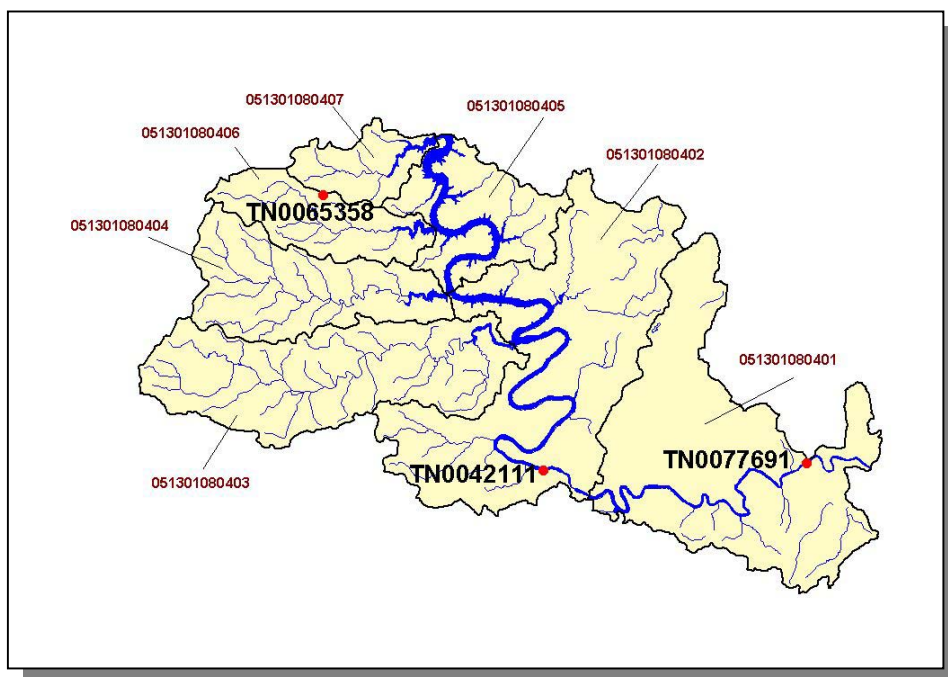


**Figure 4-35. Location of STORET Monitoring Sites in Subwatershed 0513010804.** Subwatershed 051301080401, 051301080402, 051301080403, 051301080404, 051301080405, 051301080406, and 051301080407 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

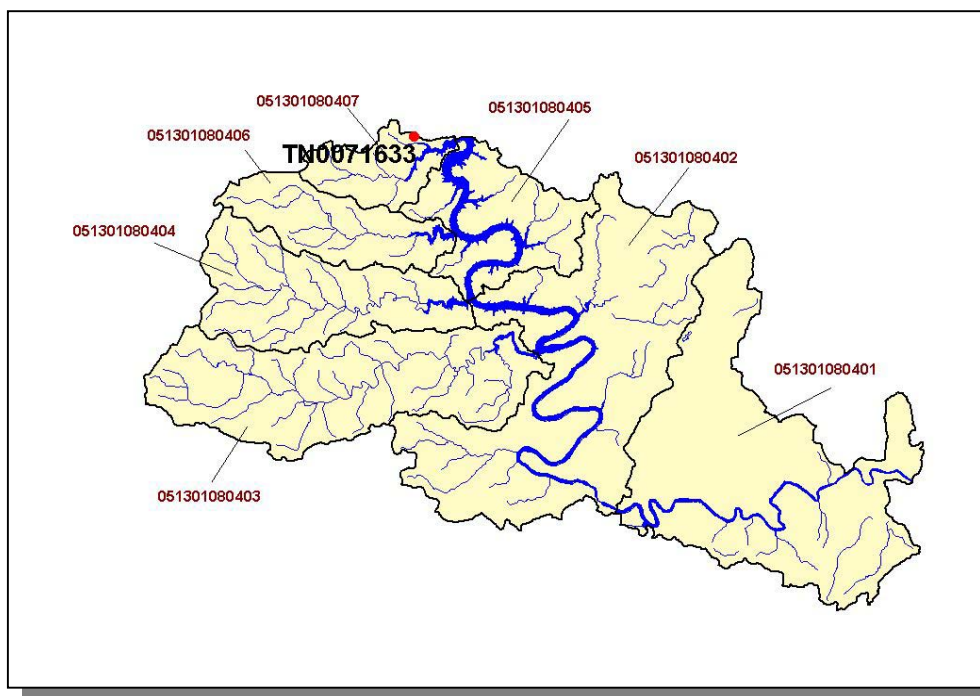
**4.2.D.ii.** Point Source Contributions.



**Figure 4-36. Location of Active Point Source Facilities in Subwatershed 0513010804.** Subwatershed 051301080401, 051301080402, 051301080403, 051301080404, 051301080405, 051301080406, and 051301080407 boundaries are shown for reference. More information is provided in the following figures.

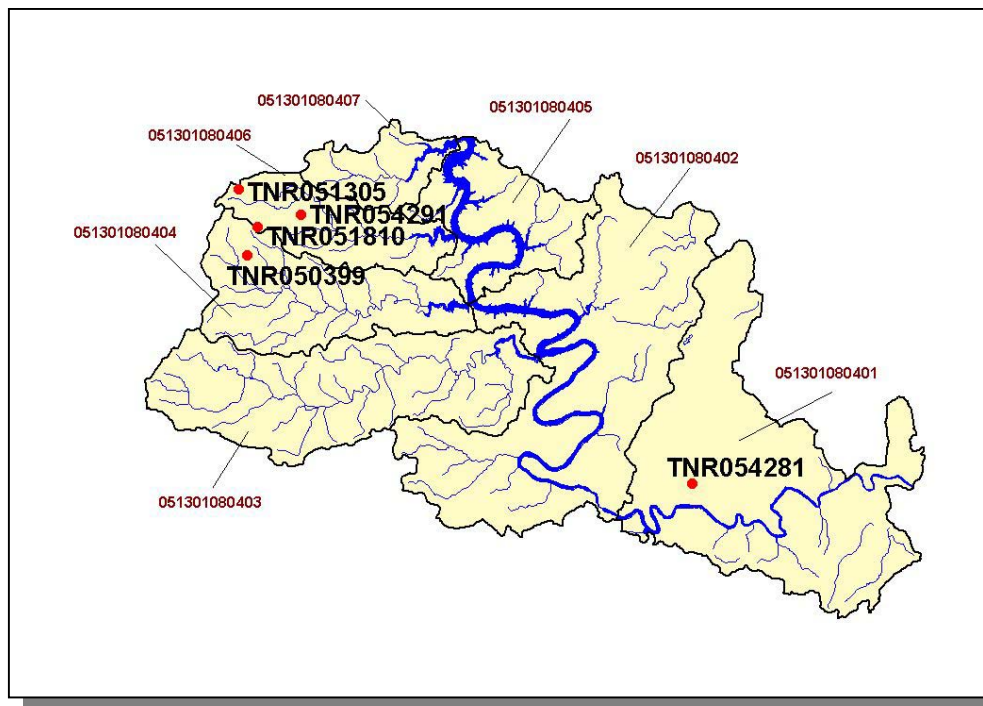


**Figure 4-37. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010804.** Subwatershed 051301080401, 051301080402, 051301080403, 051301080404, 051301080405, 051301080406, and 051301080407 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

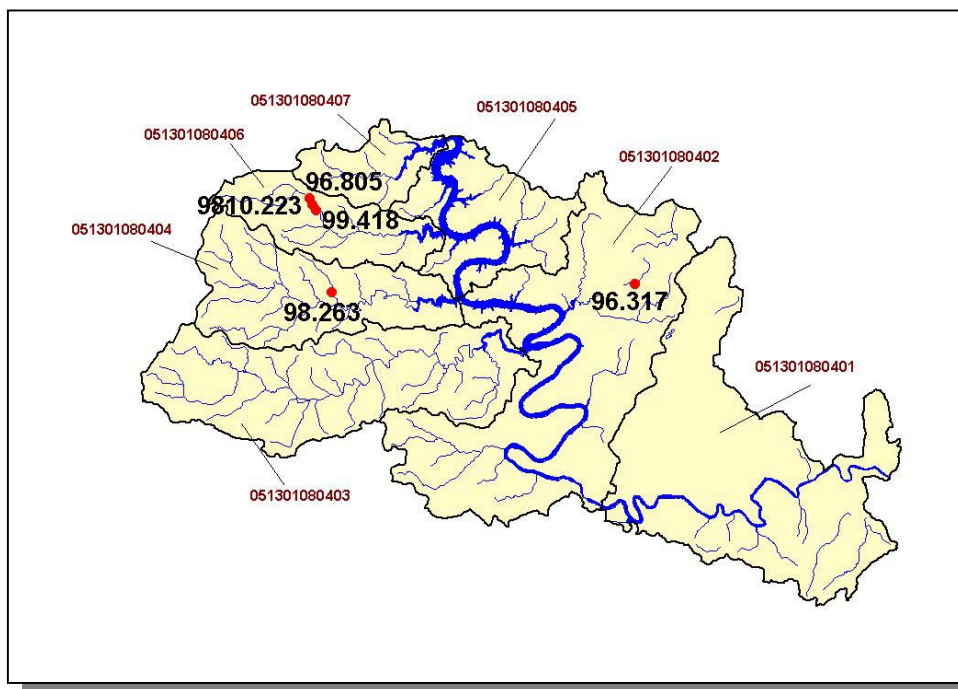


**Figure 4-38. Location of Active Mining Sites in Subwatershed 0513010804.** Subwatershed 051301080401, 051301080402, 051301080403, 051301080404, 051301080405, 051301080406, and 051301080407 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.





**Figure 4-39. Location of TMSF Facilities in Subwatershed 0513010804.** Subwatershed 051301080401, 051301080402, 051301080403, 051301080404, 051301080405, 051301080406, and 051301080407 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-40. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010804.** Subwatershed 051301080401, 051301080402, 051301080403, 051301080404, 051301080405, 051301080406, and 051301080407 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

**4.2.D.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Milk Cow	Cattle	Chickens	Chickens Sold	Hogs	Sheep
12,892	1,240	25,078	21	0	532	81

**Table 4-23. Summary of Livestock Count Estimates in Subwatershed 0513010804.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cannon	88.5	88.5	1.7	7.1
Van Buren	145.0	135.4	2.3	9.5
Warren	93.6	93.6	2.4	10.1
White	129.4	129.4	4.9	23.3
<b>Total</b>	<b>456.5</b>	<b>446.9</b>	<b>11.3</b>	<b>50.0</b>

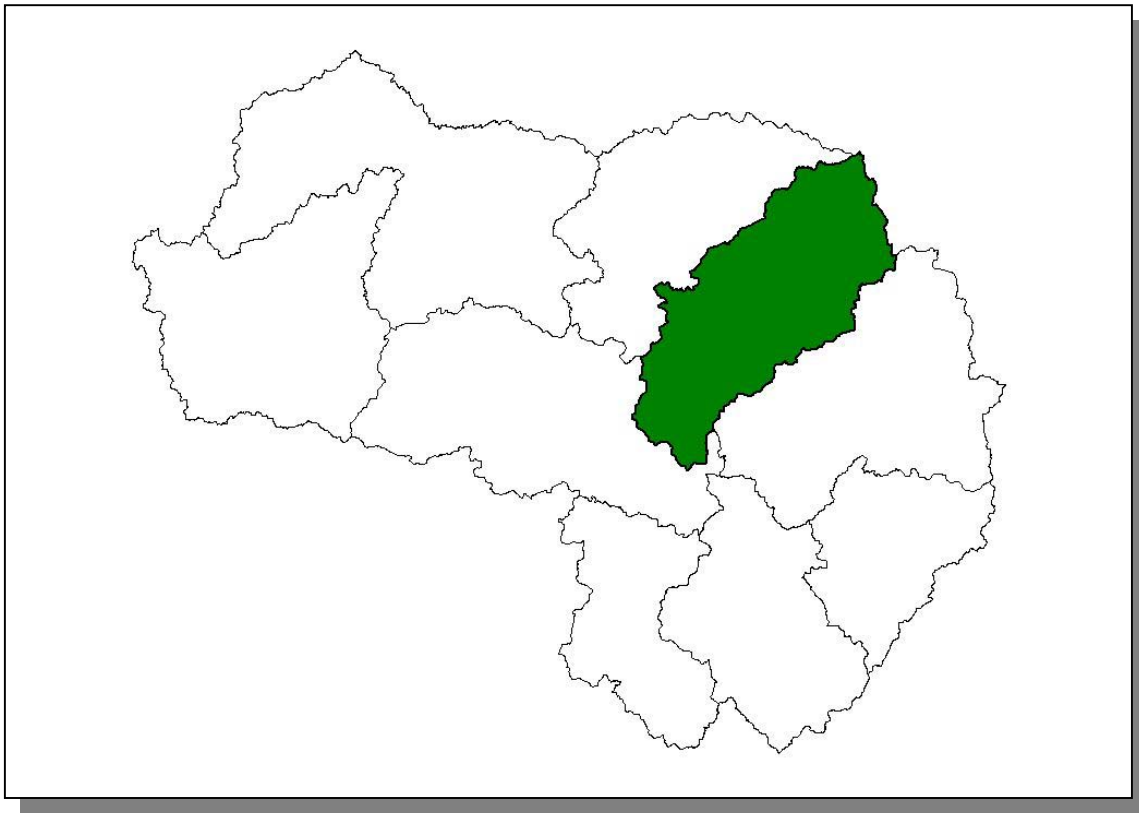
**Table 4-24. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0513010804.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Farmsteads and Ranch Headquarters	0.24
Non Agricultural Land Use	0.00
Corn (Row Crops)	6.15
Soybeans (Row Crops)	3.97
Tobacco (Row Crops)	7.88
Wheat (Close Grown Cropland)	6.42
All Other Close Grown Cropland	0.67
Grass (Hayland)	0.56
Legume (Hayland)	0.47
Legume/Grass (Hayland)	0.98
Other Cropland not Planted	2.01
Grass (Pastureland)	0.90
Grass, Forbs, Legumes (Mixed Pasture)	0.60
Other Land in Farms	0.25
Conservation Reserve Program Land	0.20
Legume (Pastureland)	0.37
Fruit (Horticulture)	0.08
Other (Horticulture)	3.50

**Table 4-25. Annual Soil Loss in Subwatershed 0513010804.**

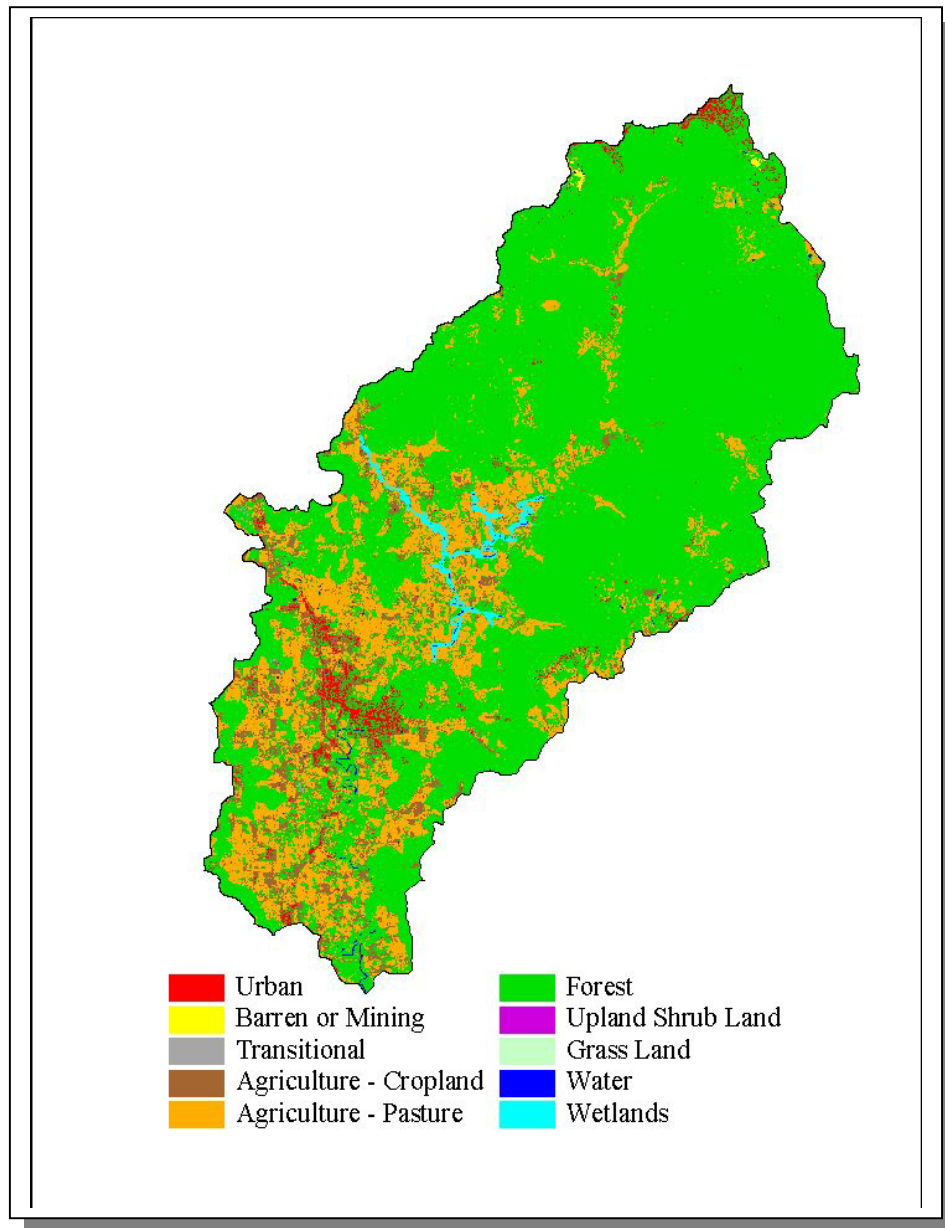


**4.2.E. 0513010805.**

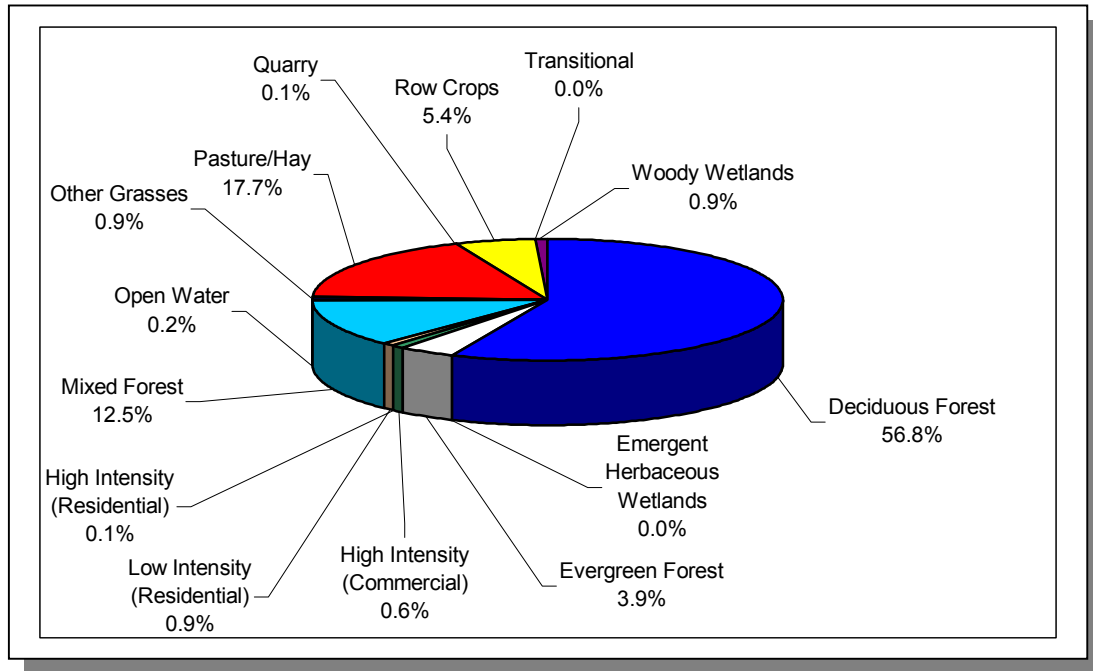


**Figure 4-41. Location of Subwatershed 0513010805.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.

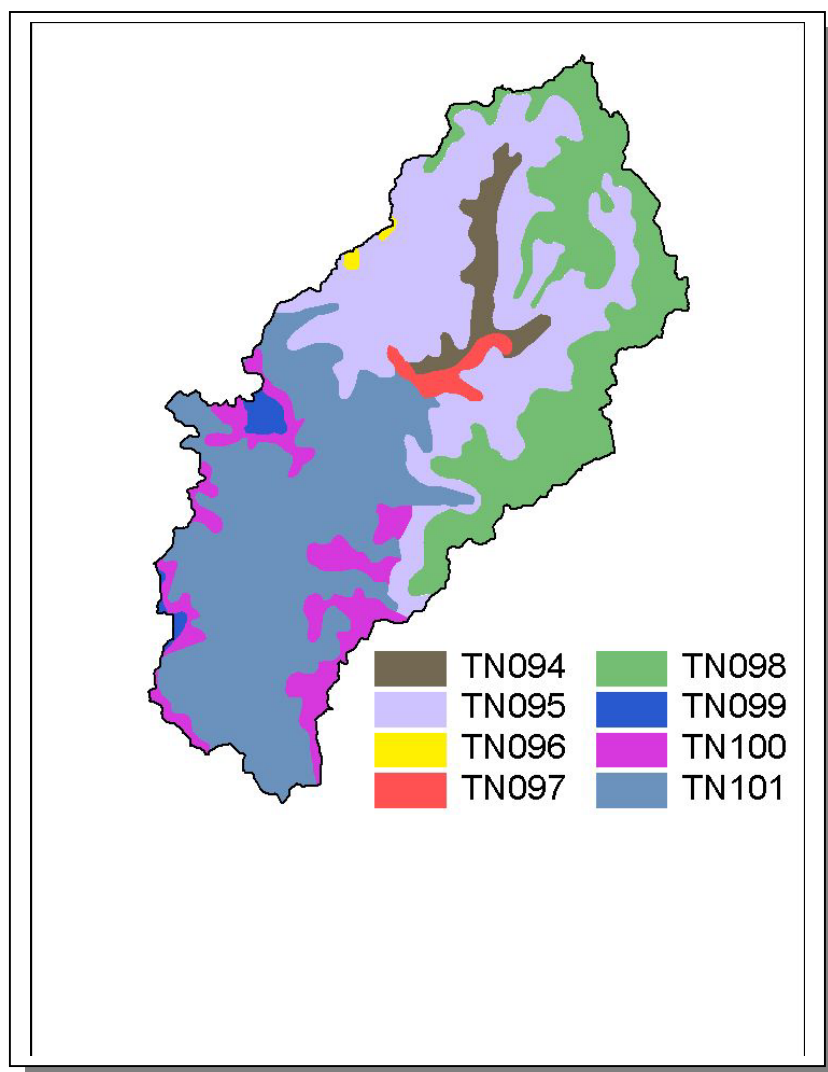
**4.2.E.i.** General Description.



**Figure 4-42. Illustration of Land Use Distribution in Subwatershed 0513010805.**



**Figure 4-43. Land Use Distribution in Subwatershed 0513010805.** More information is provided in Caney Fork-Appendix IV.



**Figure 4-44. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010805.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN094	0.00	B	1.73	4.70	Loam	0.24
TN095	0.00	B	2.35	5.12	Loam	0.31
TN096	1.00	C	1.22	5.16	Silty Loam	0.38
TN097	0.00	B	1.62	5.55	Loam	0.32
TN098	1.00	C	3.98	4.82	Loam	0.32
TN099	1.00	B	1.65	4.98	Silty Loam	0.33
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35

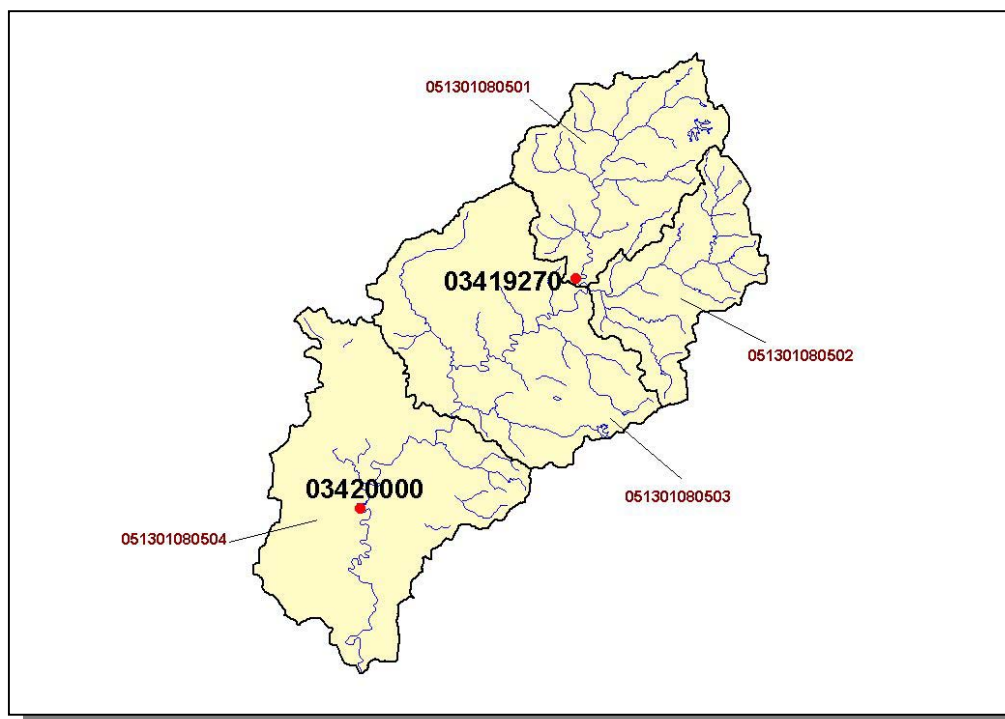
**Table 4-26. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010805.** More information is provided in Caney Fork-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Cumberland	34,736	43,217	0.99	343	426	24.2
Putnam	51,373	58,326	14.24	7,315	8,305	13.5
White	20,090	22,201	36.71	7,396	8,151	10.5
<b>Total</b>	<b>106,199</b>	<b>123,744</b>		<b>15,034</b>	<b>16,882</b>	<b>12.3</b>

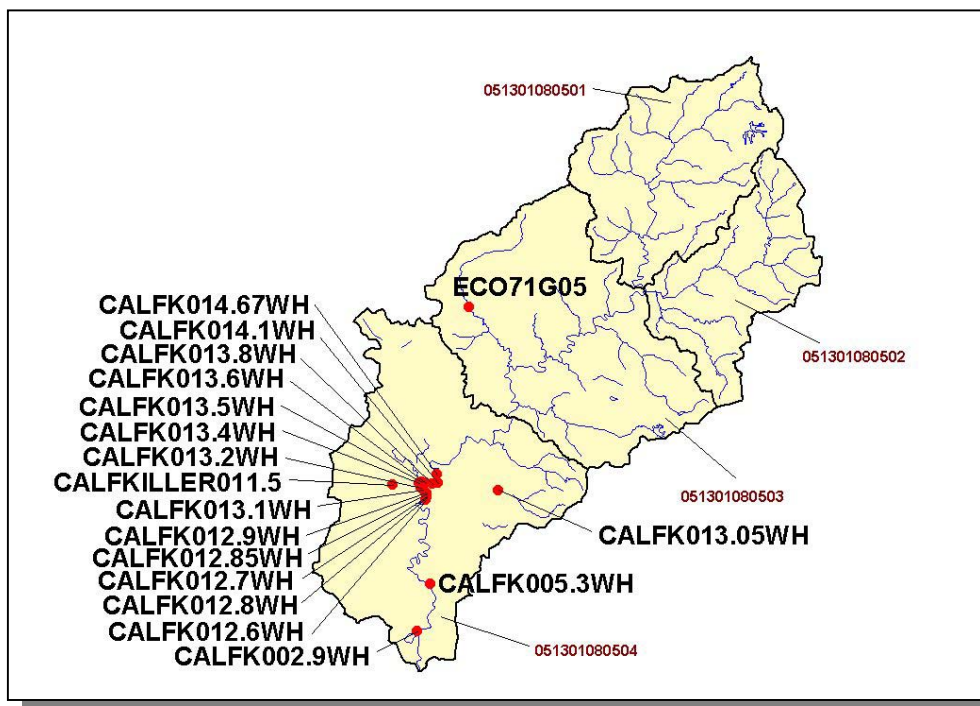
*Table 4-27. Population Estimates in Subwatershed 0513010805.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Doyle	White	359	150	10	129	11
Sparta	White	4,681	2,034	1,760	267	7
Monterey	Putnam	2,559	1,113	875	228	10
<b>Totals</b>		<b>3,506</b>	<b>3,297</b>	<b>2,645</b>	<b>624</b>	<b>28</b>

*Table 4-28. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0513010805.*

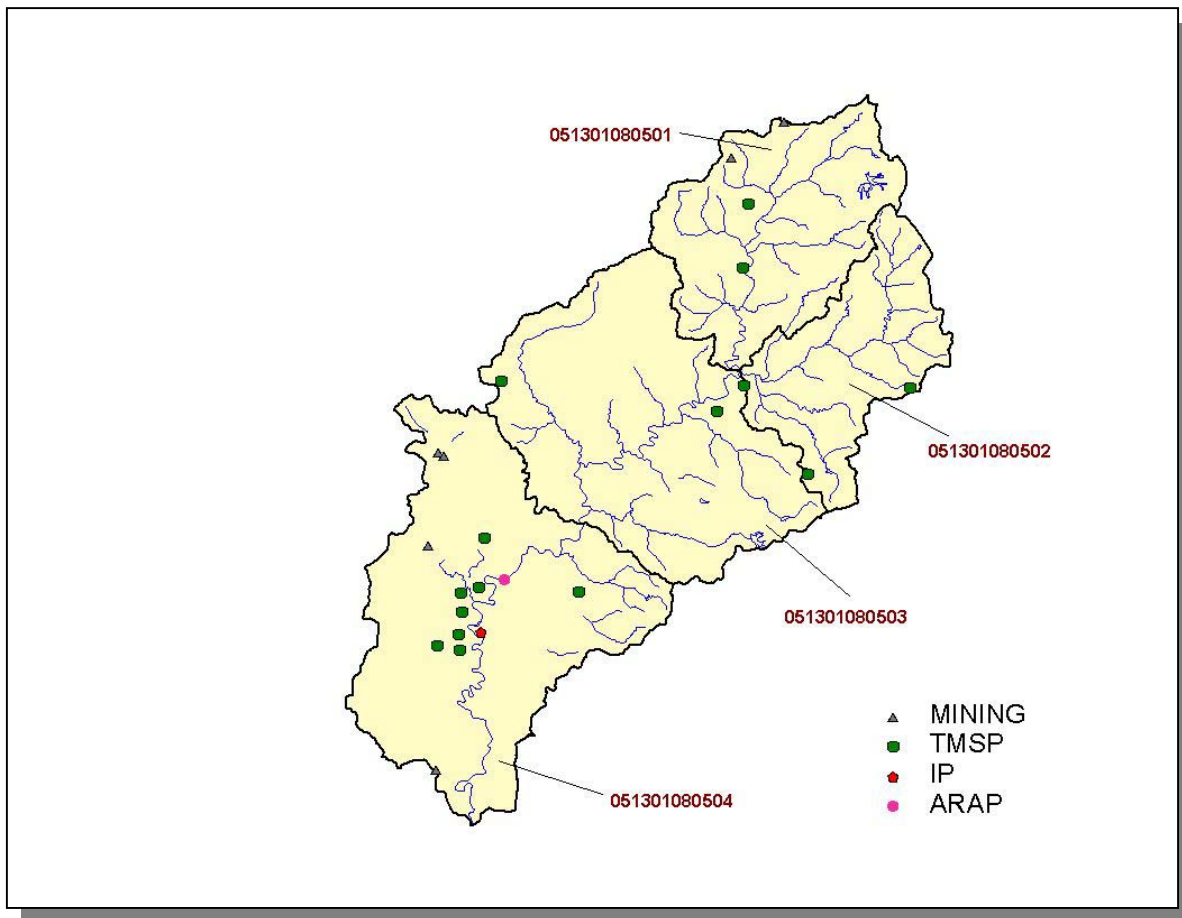


**Figure 4-45. Location of Historical Streamflow Data Collection Sites in Subwatershed 0513010805.** Subwatershed 051301080501, 051301080502, 051301080503, and 051301080504 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



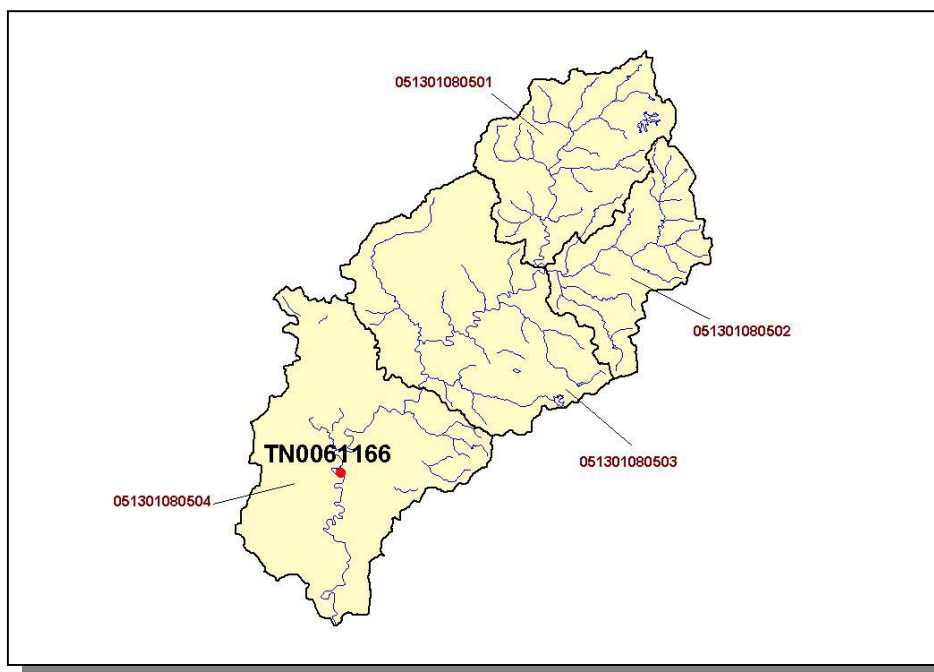
**Figure 4-46. Location of STORET Monitoring Sites in Subwatershed 0513010805.** Subwatershed 051301080501, 051301080502, 051301080503, and 051301080504 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

4.2.E.ii. Point Source Contributions.

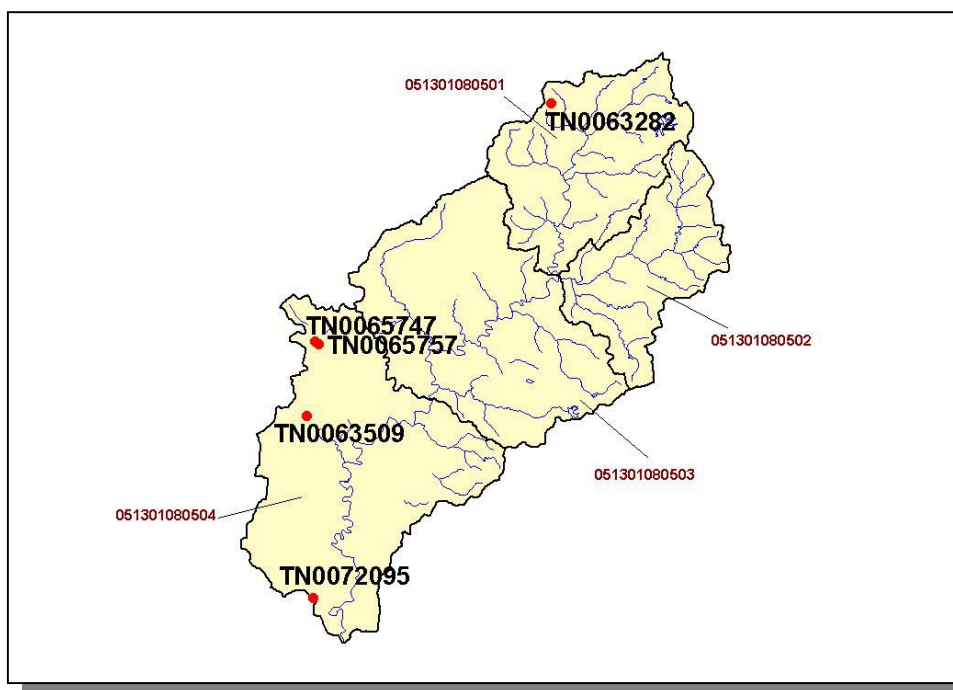


**Figure 4-47. Location of Active Point Source Facilities in Subwatershed 0513010805.** Subwatershed 051301080501, 051301080502, 051301080503, and 051301080504 boundaries are shown for reference. More information is provided in the following figures.

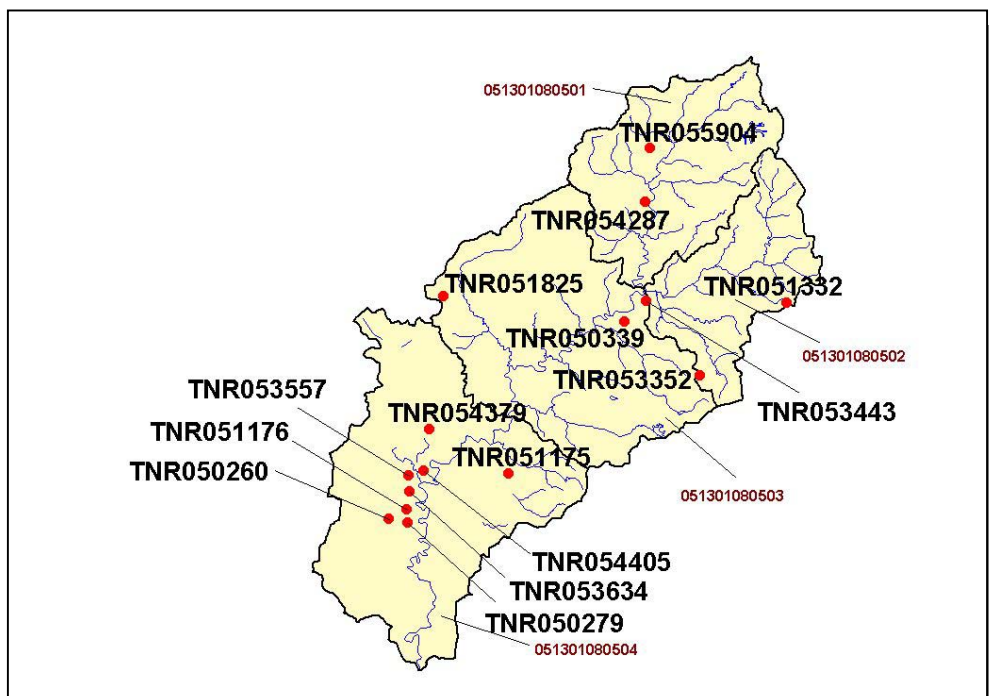




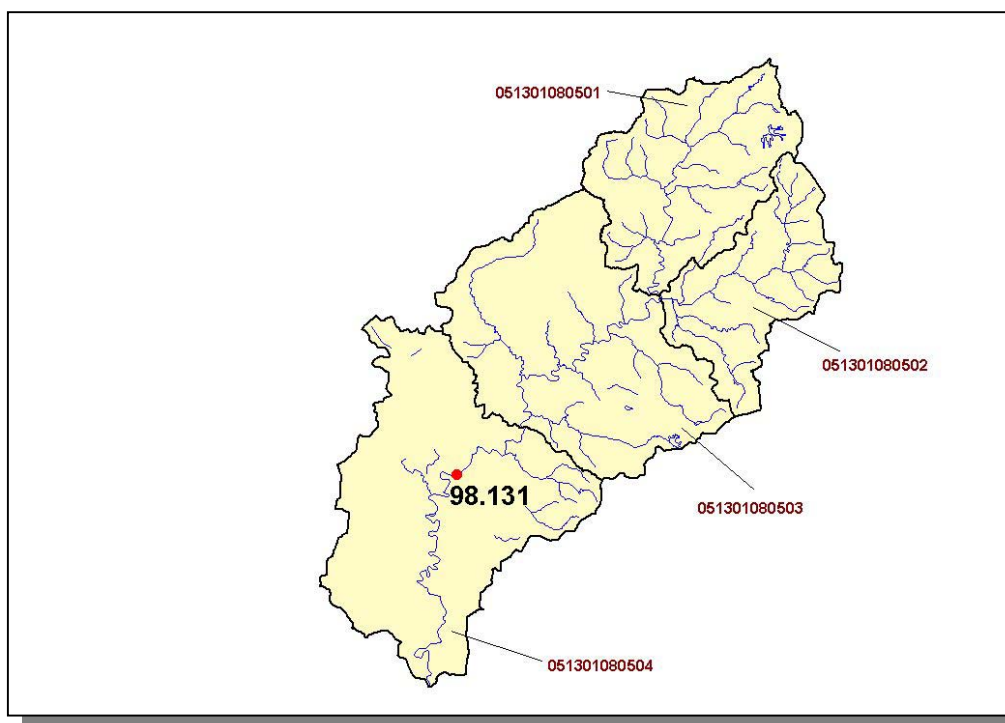
**Figure 4-48. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010805.** Subwatershed 051301080501, 051301080502, 051301080503, and 051301080504 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-49. Location of Active Mining Sites in Subwatershed 0513010805.** Subwatershed 051301080501, 051301080502, 051301080503, and 051301080504 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-50. Location of TMSP Facilities in Subwatershed 0513010805.** Subwatershed 051301080501, 051301080502, 051301080503, and 051301080504 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-51. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010805.** Subwatershed 051301080501, 051301080502, 051301080503, and 051301080504 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

**4.2.E.iii.** Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Milk Cow	Cattle	Chickens	Chickens Sold	Hogs	Sheep
7,872	1,301	16,565	13	0	670	40

**Table 4-29. Summary of Livestock Count Estimates in Subwatershed 0513010805.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

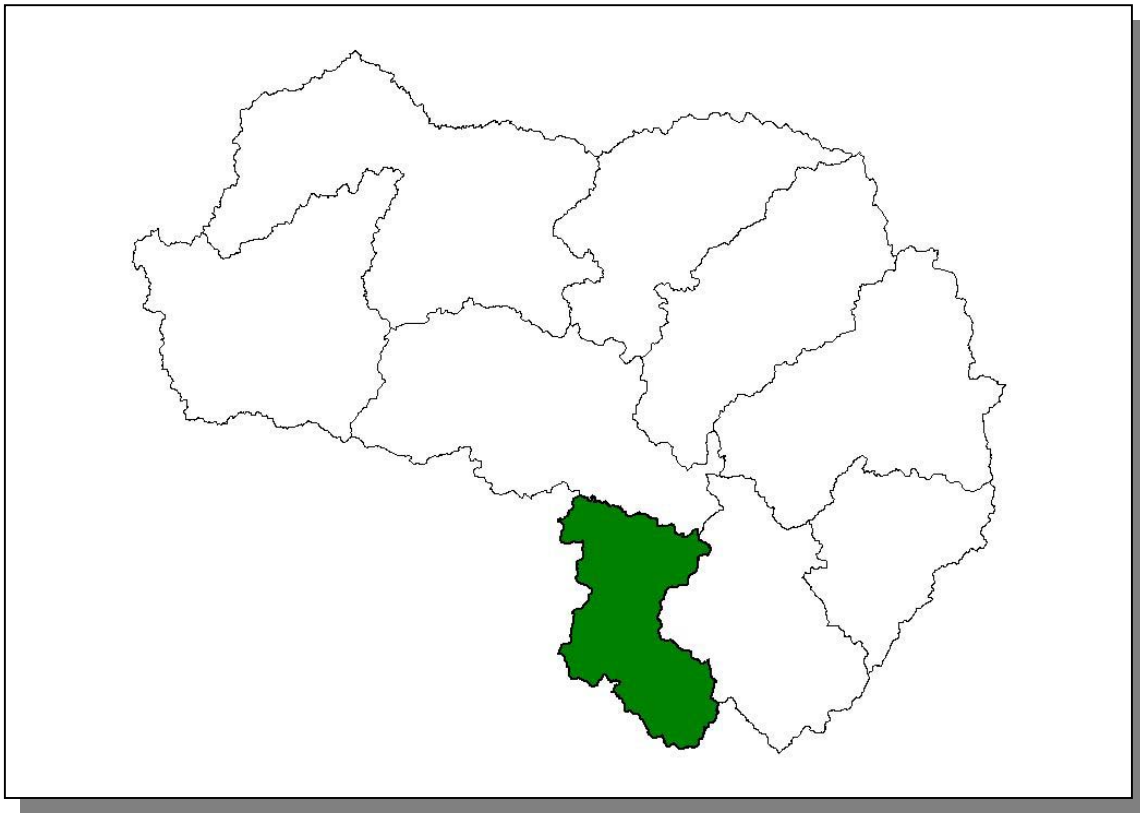
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cumberland	320.3	320.3	5.9	22.5
Putnam	152.5	152.3	3.6	16.4
Van Buren	145.0	135.4	2.3	9.5
White	129.4	129.4	4.9	23.3
<b>Totals</b>	<b>747.2</b>	<b>737.4</b>	<b>16.7</b>	<b>71.7</b>

**Table 4-30. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0513010805.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.82
Legume (Pastureland)	0.15
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Legume (Hayland)	0.43
Grass (Hayland)	0.66
Legume/Grass (Hayland)	0.36
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Soybeans (Row Crops)	6.26
Corn (Row Crops)	11.52
Tobacco (Row Crops)	7.94
Wheat (Close Grown Cropland)	6.10
All Other Close Grown Cropland	0.67
Conservation Reserve Program Land	0.13
Other Vegetable and Truck Crops	14.54
Fruit (Horticulture)	0.08
Other (Horticulture)	3.72
Farmsteads and Ranch Headquarters	0.36
Other Cropland not Planted	2.26
Non Agricultural Land Use	0.00
Other Land in Farms	0.25

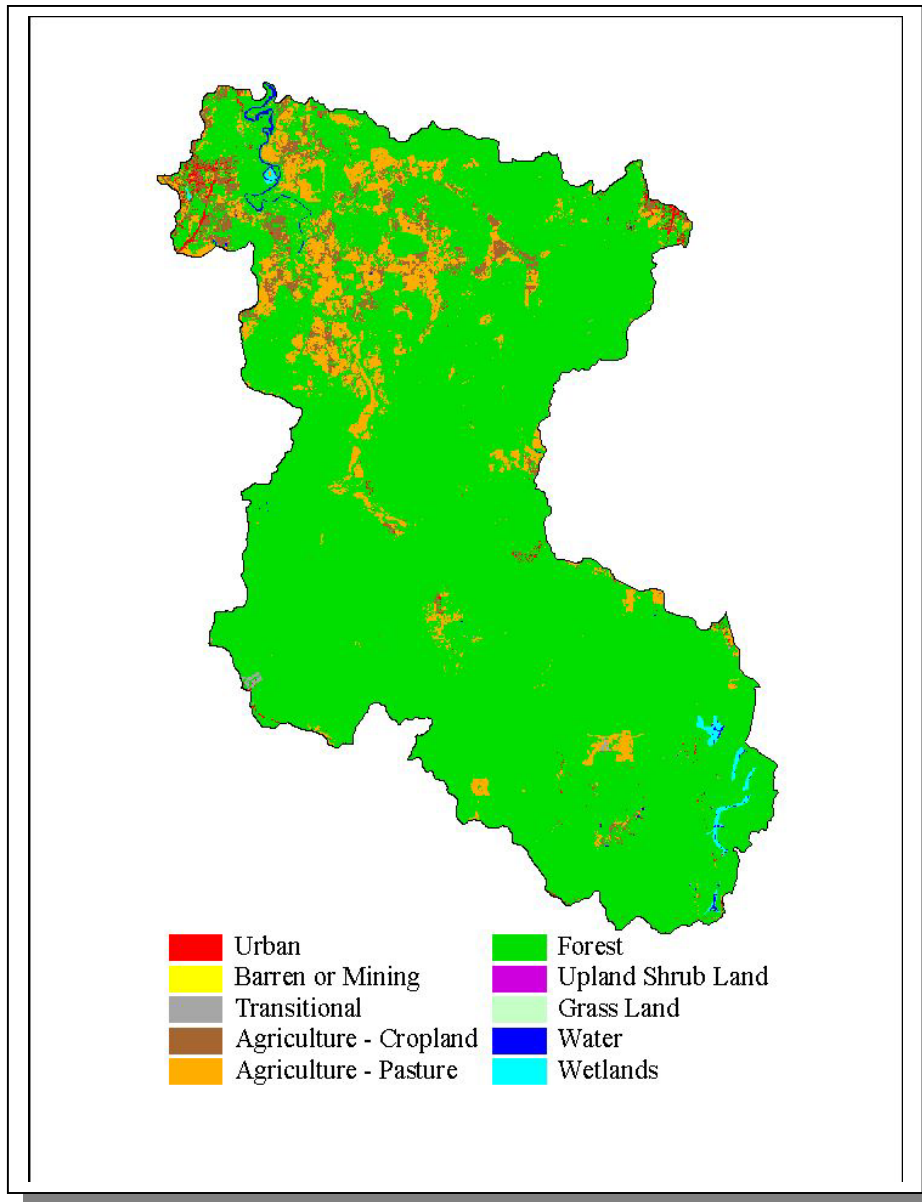
**Table 4-31. Annual Estimated Soil Loss in Subwatershed 0513010805.**

**4.2.F. 0513010806**

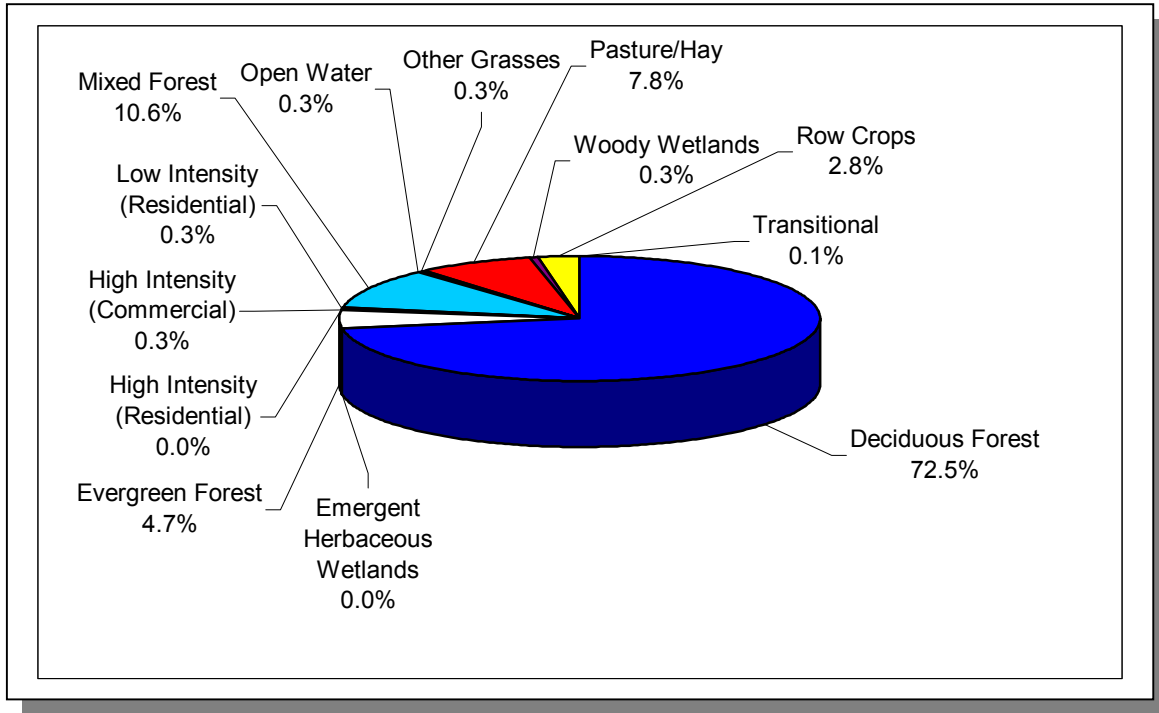


**Figure 4-52. Location of Subwatershed 0513010806.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.

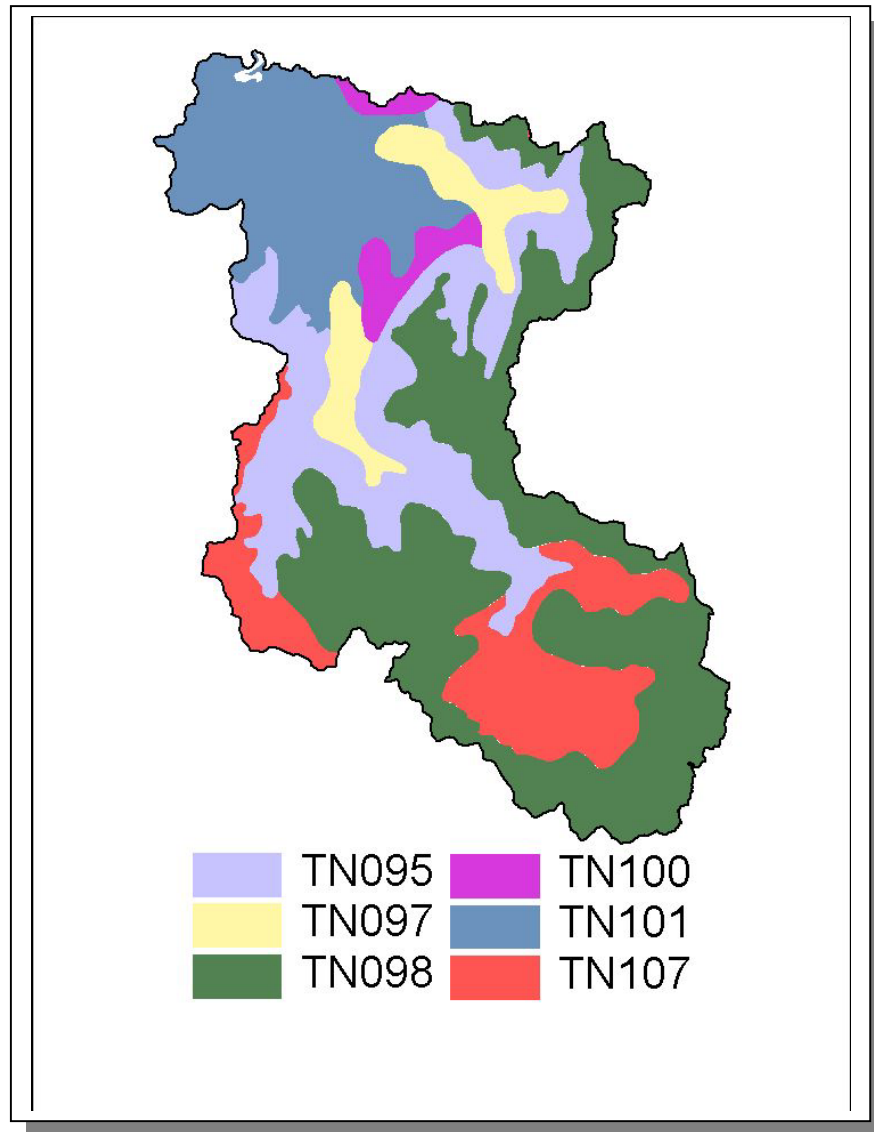
4.2.F.i. General Description.



**Figure 4-53. Illustration of Land Use Distribution in Subwatershed 0513010806.**



**Figure 4-54. Land Use Distribution in Subwatershed 0513010806.** More information is provided in Hiwassee-Appendix IV.



**Figure 4-55. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010806.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN097	0.00	B	1.62	5.55	Loam	0.32
TN098	1.00	C	3.98	4.82	Loam	0.32
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35
TN107	1.00	C	6.34	4.84	Loam	0.28

**Table 4-32. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010806.** More information is provided in Caney Fork-Appendix IV.

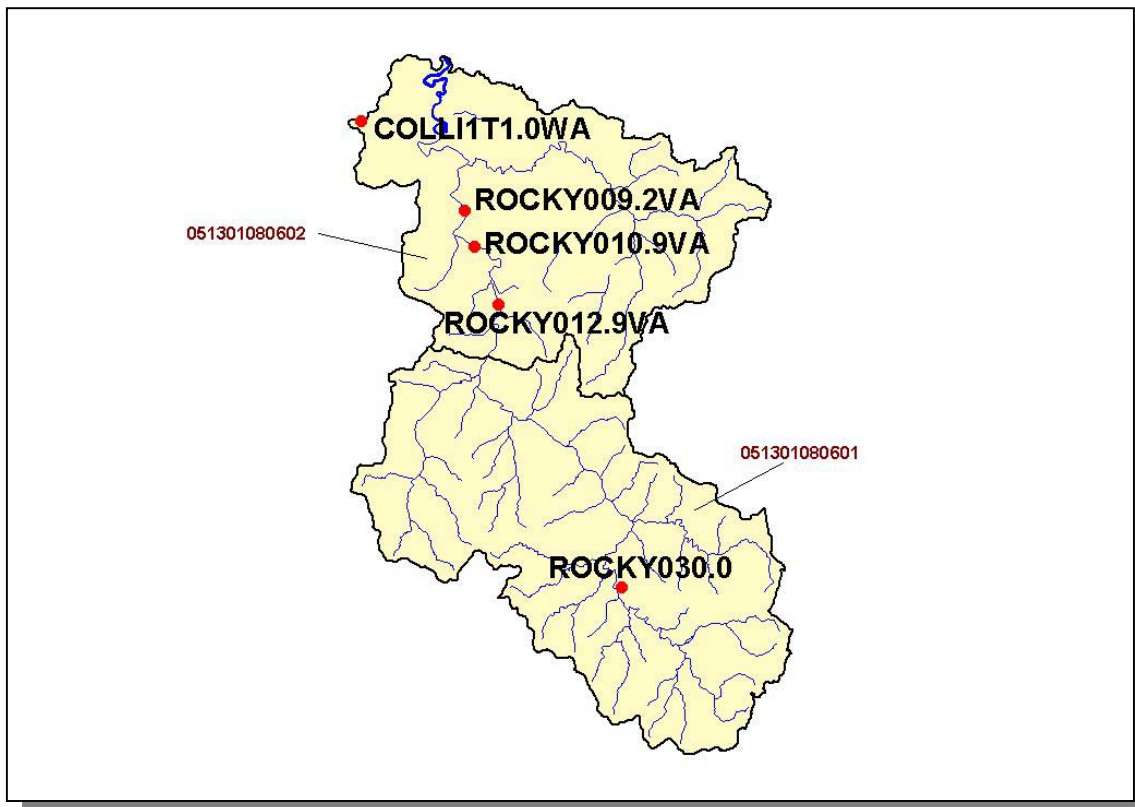


County	TOTAL COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		PERCENT CHANGE
	1990	1997 Est.		1990	1997	
Sequatchie	8,863	10,119	2.37	210	239	13.8
Van Buren	4,846	5,060	31.68	1,535	1,603	4.4
Warren	32,992	35,777	8.3	2,739	2,971	8.5
<b>Totals</b>	<b>46,701</b>	<b>50,956</b>		<b>4,484</b>	<b>4,813</b>	<b>7.3</b>

*Table 4-33. Population Estimates in Subwatershed 0513010806.*

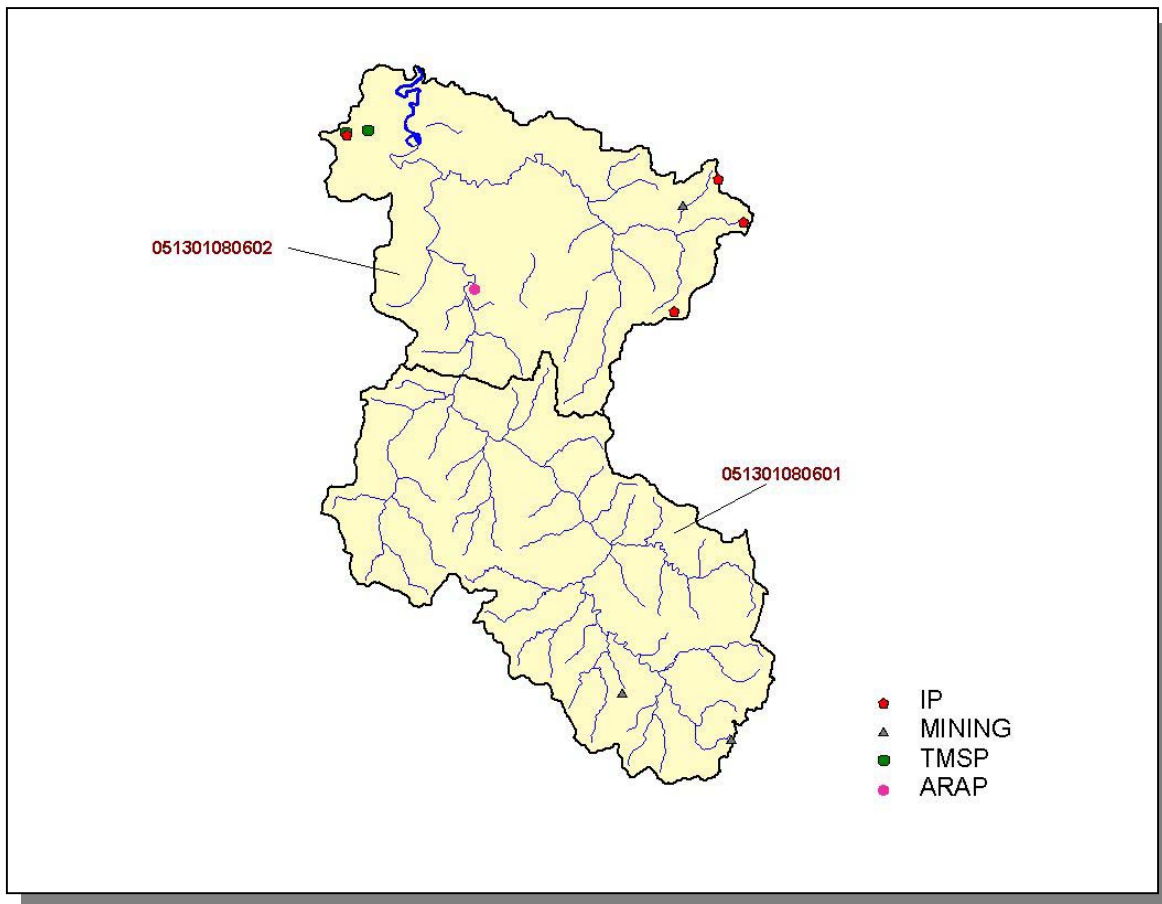
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Spencer	Van Buren	1,125	466	23	436	7

*Table 4-34. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0513010806.*

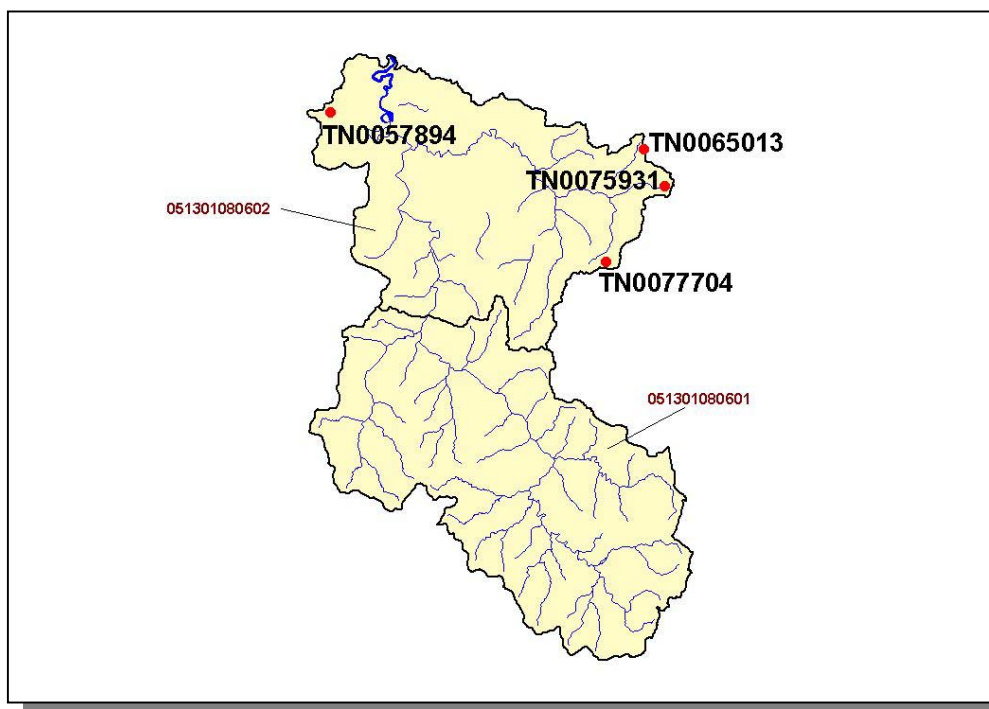


**Figure 4-56. Location of STORET Monitoring Sites in Subwatershed 0513010806.** Subwatershed 051301080601 and 051301080602 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

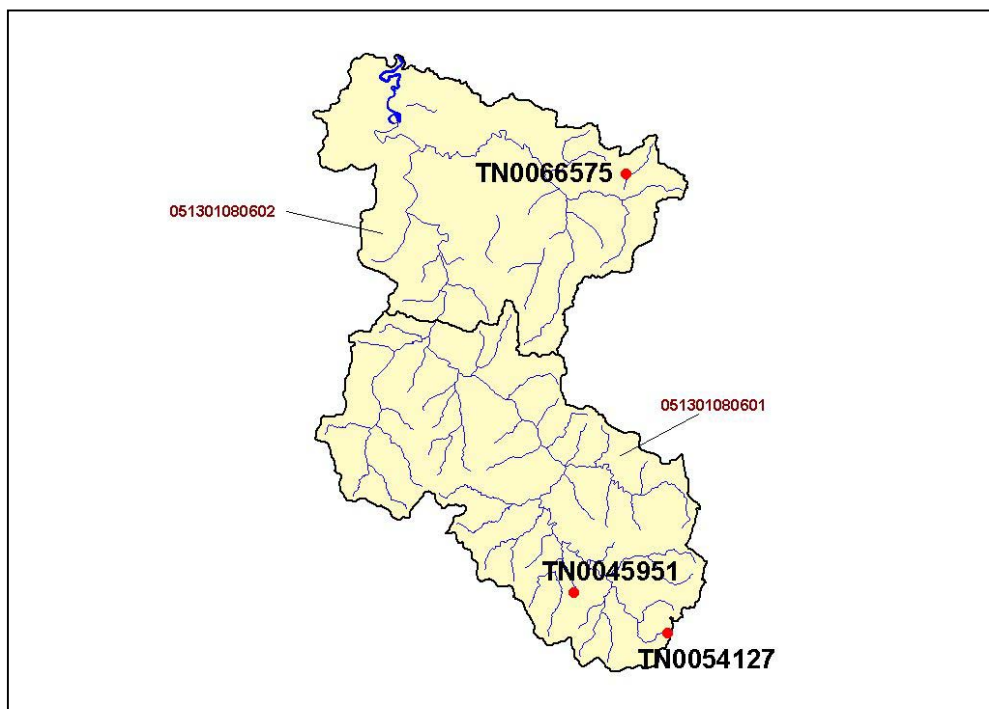
**4.2.F.ii.** Point Source Contributions.



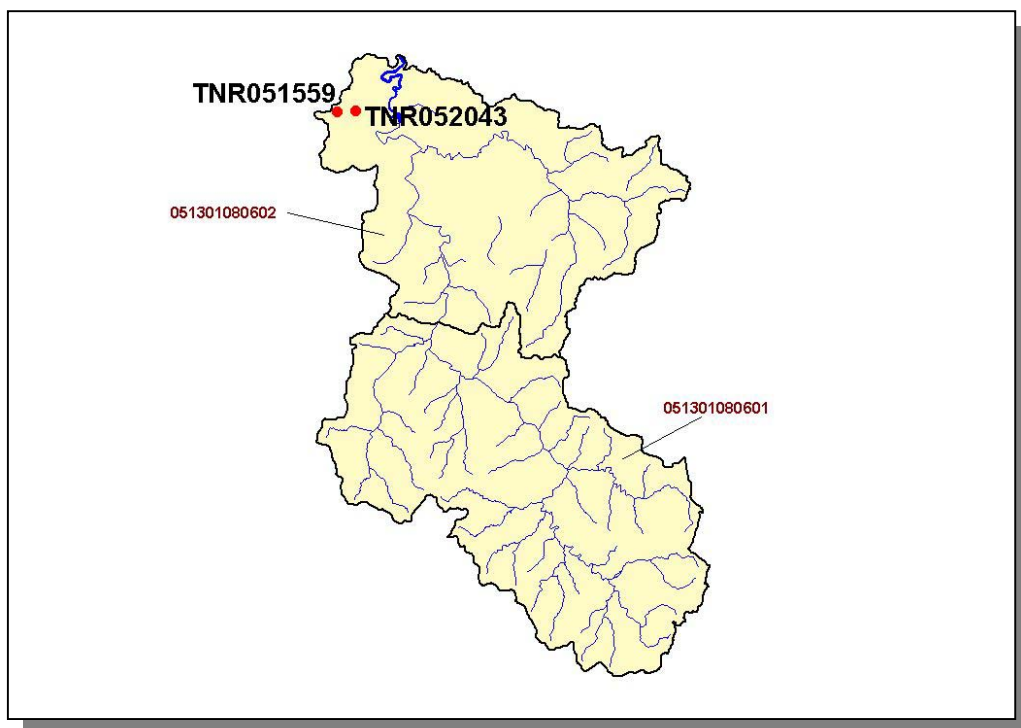
**Figure 4-57. Location of Active Point Source Facilities in Subwatershed 0513010806.** Subwatershed 051301080601 and 051301080602 boundaries are shown for reference. More information is provided in the following figures.



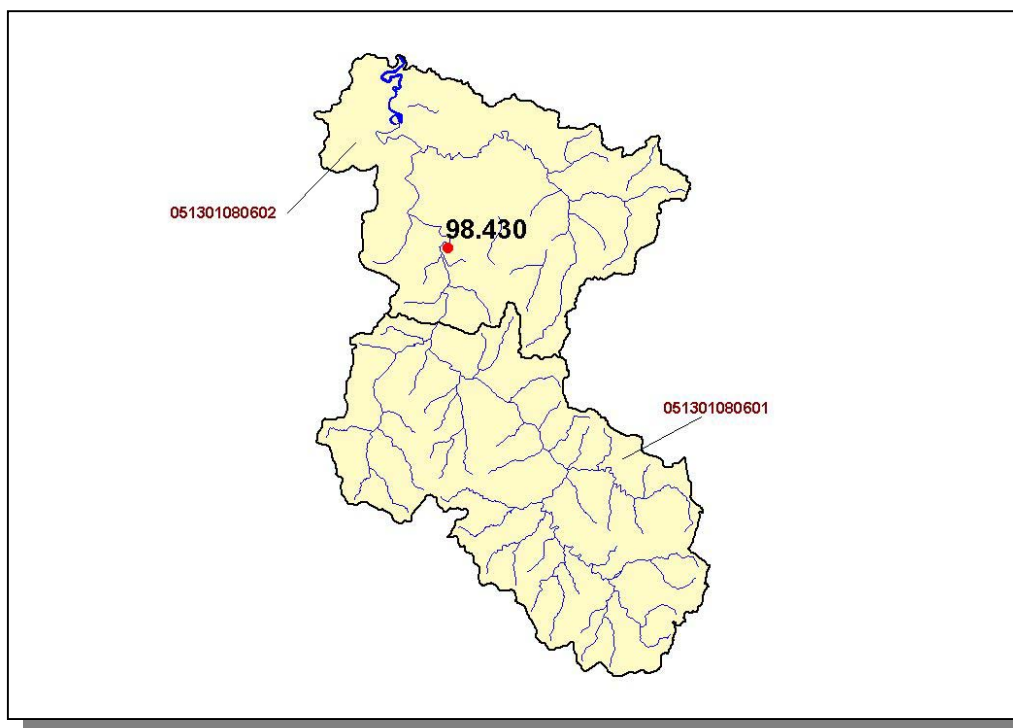
**Figure 4-58. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010706.** Subwatershed 051301080601 and 051301080602 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-59. Location of Active Mining Sites in Subwatershed 0513010806.** Subwatershed 051301080601 and 051301080602 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-60. Location of TMSP Facilities in Subwatershed 0513010806.** Subwatershed 051301080601 and 051301080602 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-61. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010806.** Subwatershed 051301080601 and 051301080602 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

**4.2.F.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Milk Cow	Cattle	Chickens	Chickens Sold	Hogs	Sheep
1,788	200	3,789	3	26,340	61	3

**Table 4-35. Summary of Livestock Count Estimates in Subwatershed 0513010806.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

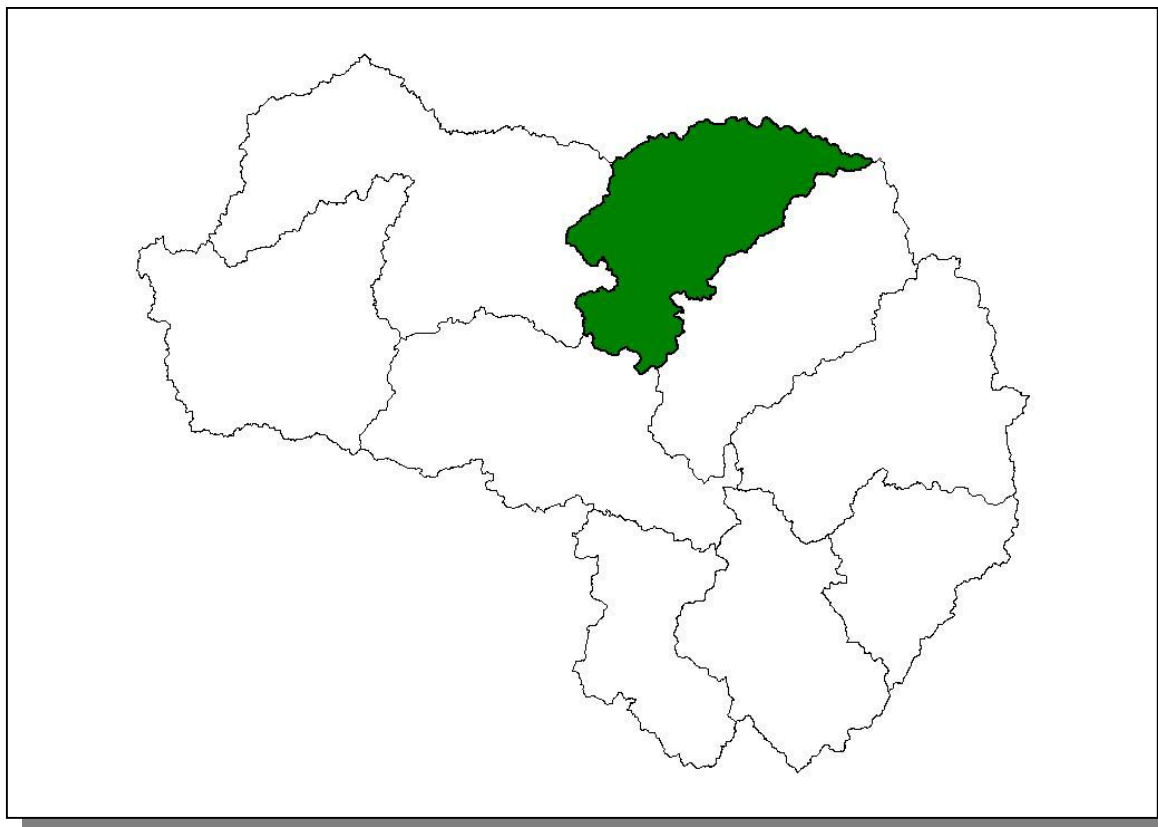
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sequatchie	137.3	137.3	0.6	1.2
Van Buren	145.0	135.4	2.3	9.5
Warren	93.6	93.6	2.4	10.1
<b>Total</b>	<b>375.9</b>	<b>366.3</b>	<b>5.3</b>	<b>20.8</b>

**Table 4-36. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0513010806.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Non Agricultural Land Use	0.00
Grass (Hayland)	0.43
Legume (Hayland)	0.10
Legume/Grass (Hayland)	4.08
Grass (Pastureland)	0.90
Grass, Forbs, Legumes (Mixed (Pasture)	0.61
Wheat (Close Grown Cropland)	10.12
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Corn (Row Crops)	7.94
Soybeans (Row Crops)	17.74
Conservation Reserve Program Land	0.33
Other (Horticultural)	0.67
Farmsteads and Ranch Headquarters	0.63

**Table 4-37. Annual Estimated Total Soil Loss in Subwatershed 0513010806.**

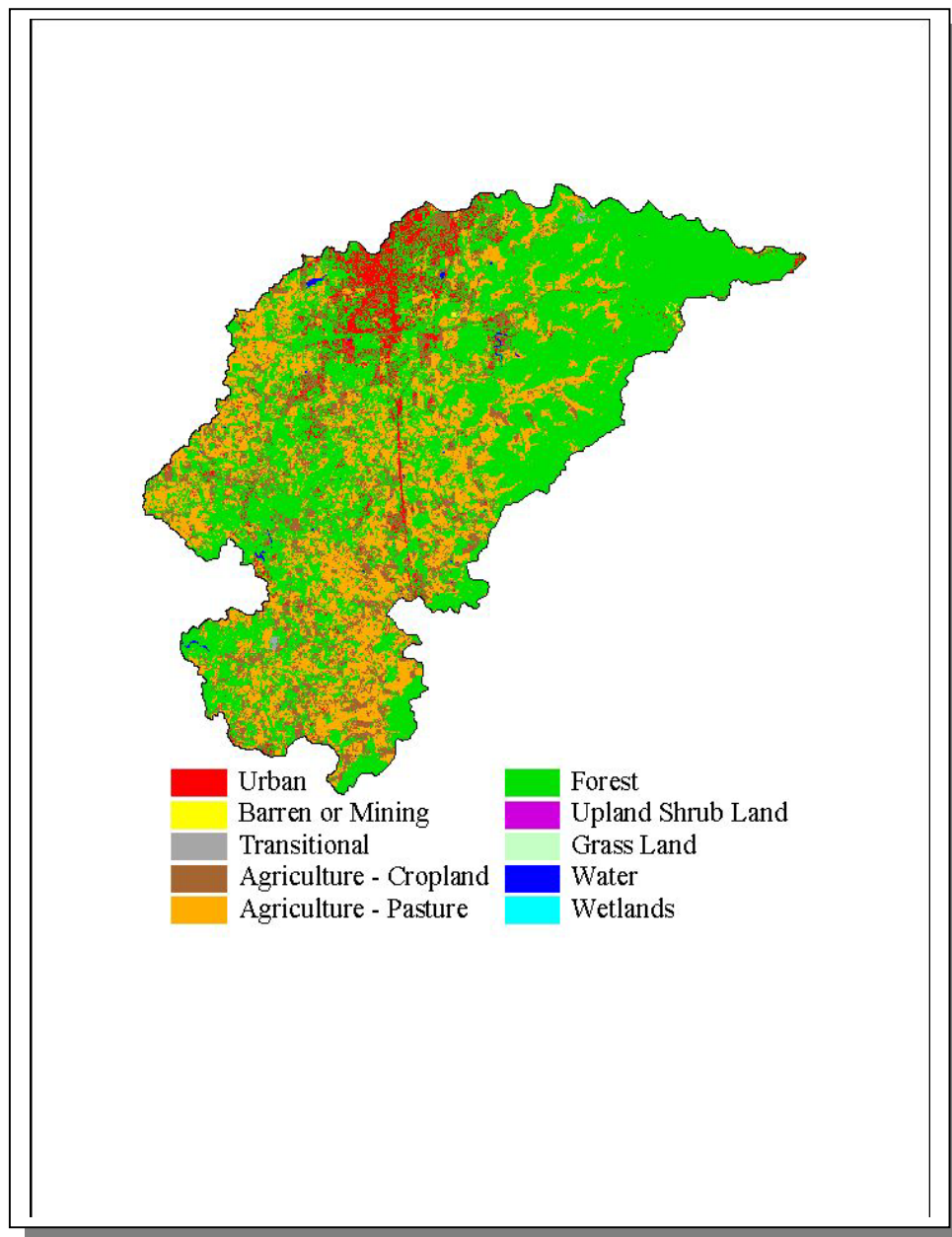
**4.2.G. 0513010807.**



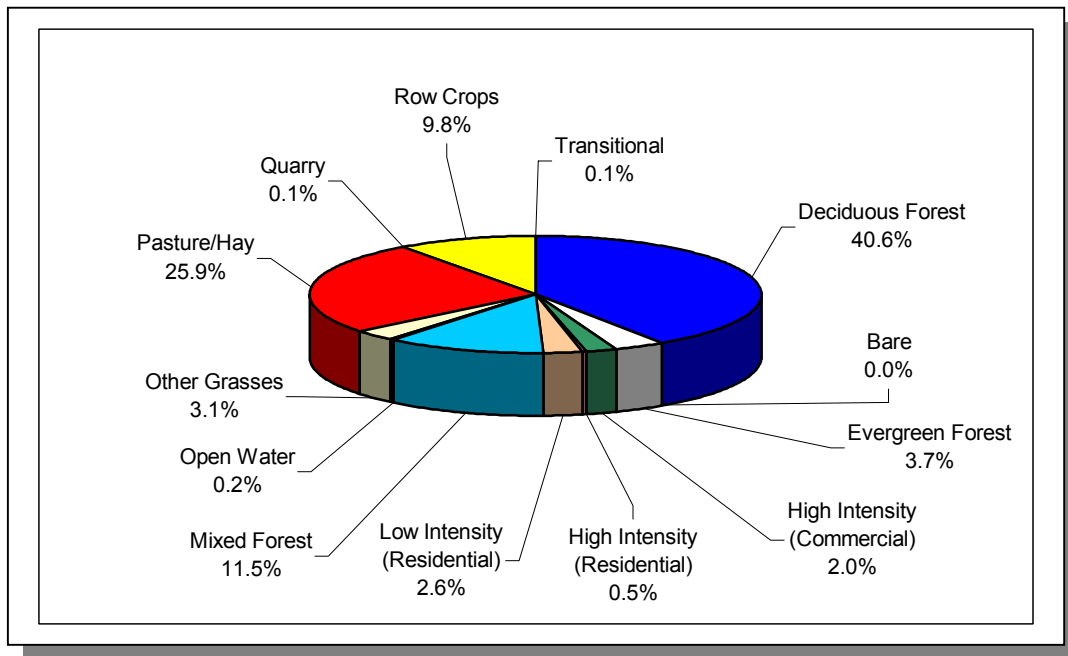
**Figure 4-62. Location of Subwatershed 0513010807.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.



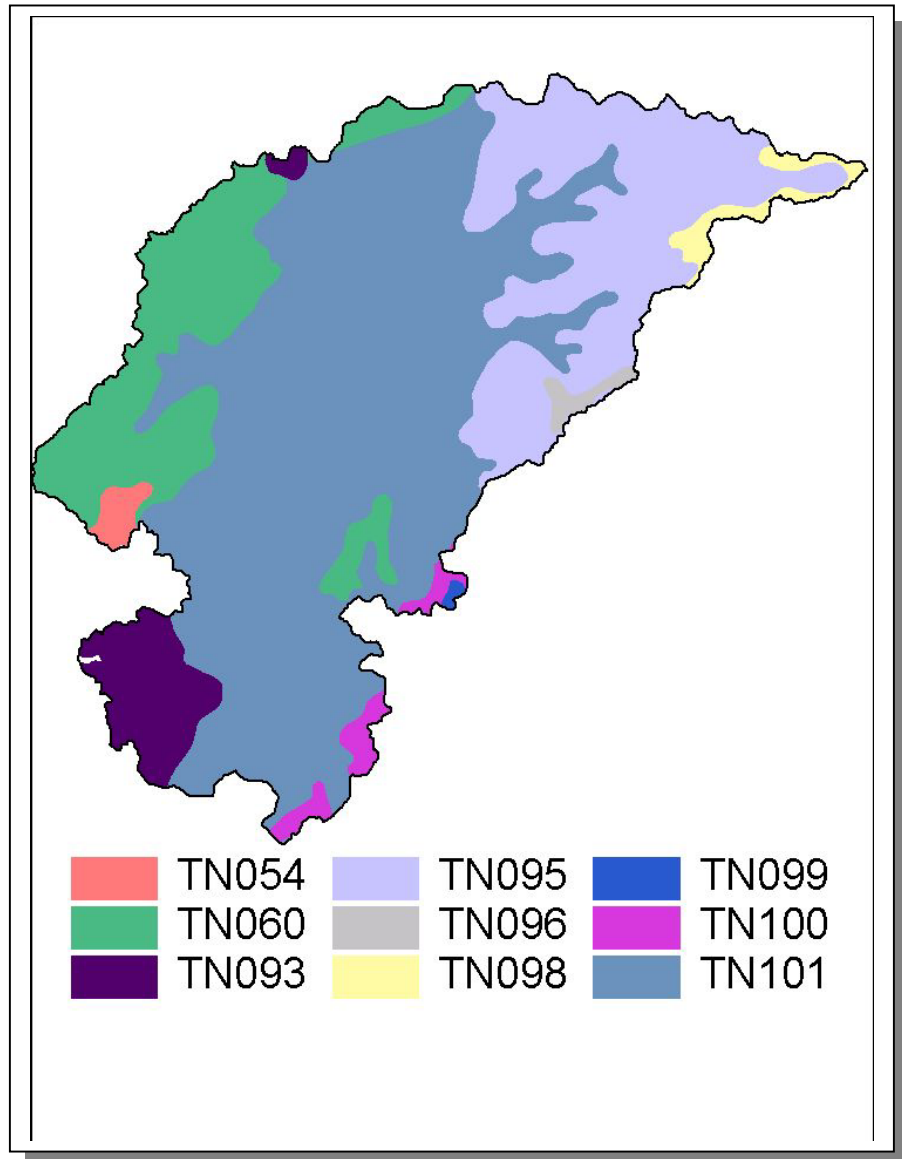
**4.2.G.i.** General Description.



**Figure 4-63. Illustration of Land Use Distribution in Subwatershed 0513010807.**



**Figure 4-64. Land Use Distribution in Subwatershed 0513010807.** More information is provided in Caney Fork-Appendix IV.



**Figure 4-65. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010807.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGI C GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN093	0.00	B	2.43	4.95	Loam	0.36
TN095	0.00	B	2.35	5.12	Loam	0.31
TN096	1.00	C	1.22	5.16	Silty Loam	0.38
TN098	1.00	C	3.98	4.82	Loam	0.32
TN099	1.00	B	1.65	4.98	Silty Loam	0.33
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35

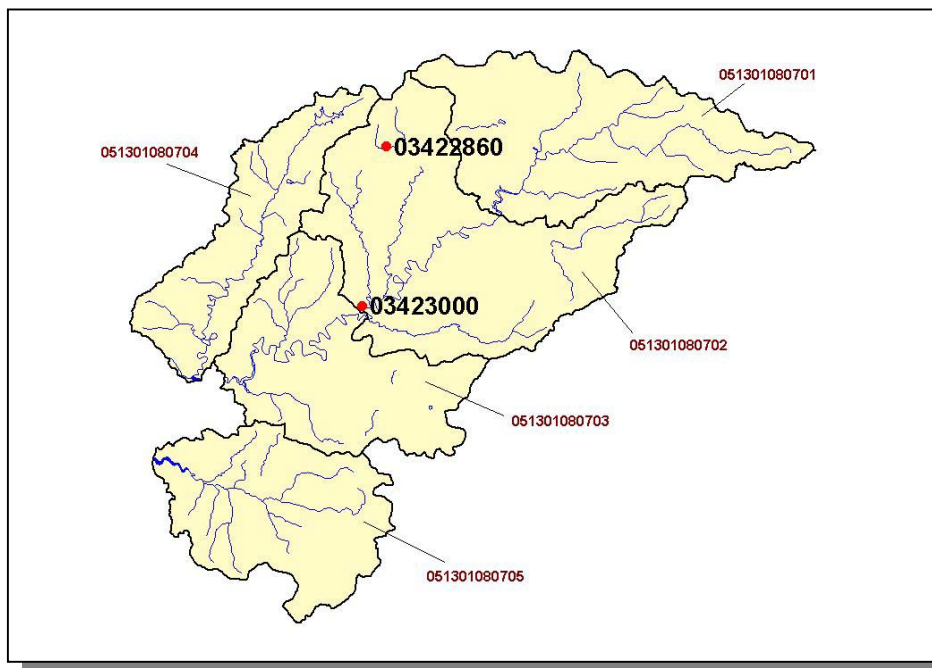
**Table 4-38. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010807.** More information is provided in Caney Fork-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
DeKalb	14,360	15,743	0.11	15	17	13.3
Putnam	51,373	58,376	27.81	14,289	16,223	13.5
White	20,090	22,201	17.17	3,450	3,812	10.5
<b>Totals</b>	<b>85,823</b>	<b>96,270</b>		<b>17,754</b>	<b>20,052</b>	<b>12.9</b>

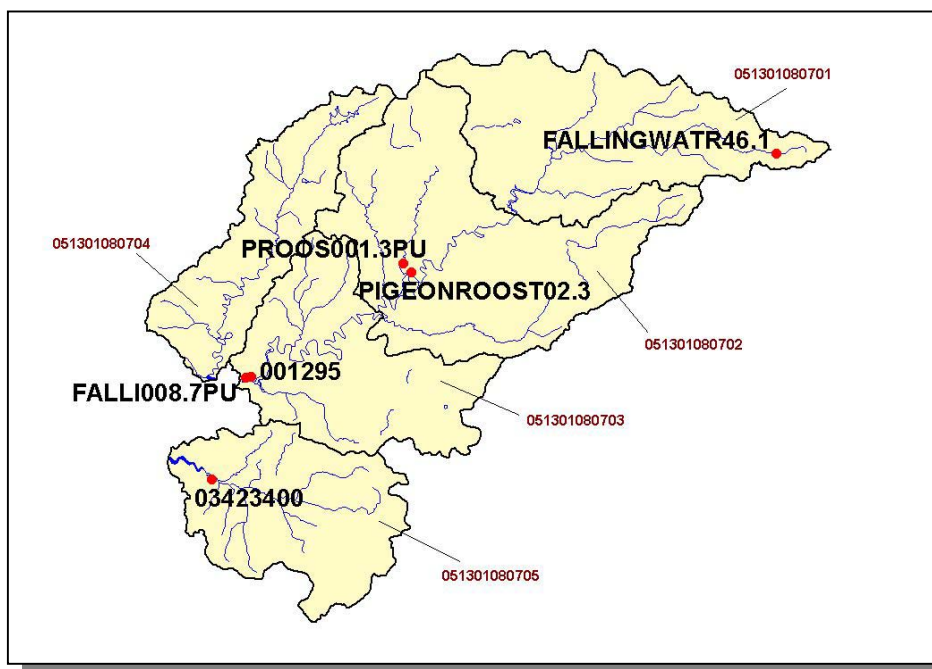
*Table 4-39. Population Estimates in Subwatershed 0513010807.*

NUMBER OF HOUSING UNITS						
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Algood	Putnam	2,399	1,016	706	308	2
Cookeville	Putnam	21,744	9,284	8,131	1,135	18
Monterey	Putnam	2,559	1,113	875	228	10
<b>Total</b>		<b>26,702</b>	<b>11,413</b>	<b>9,712</b>	<b>1,671</b>	<b>30</b>

*Table 4-40. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0513010807.*

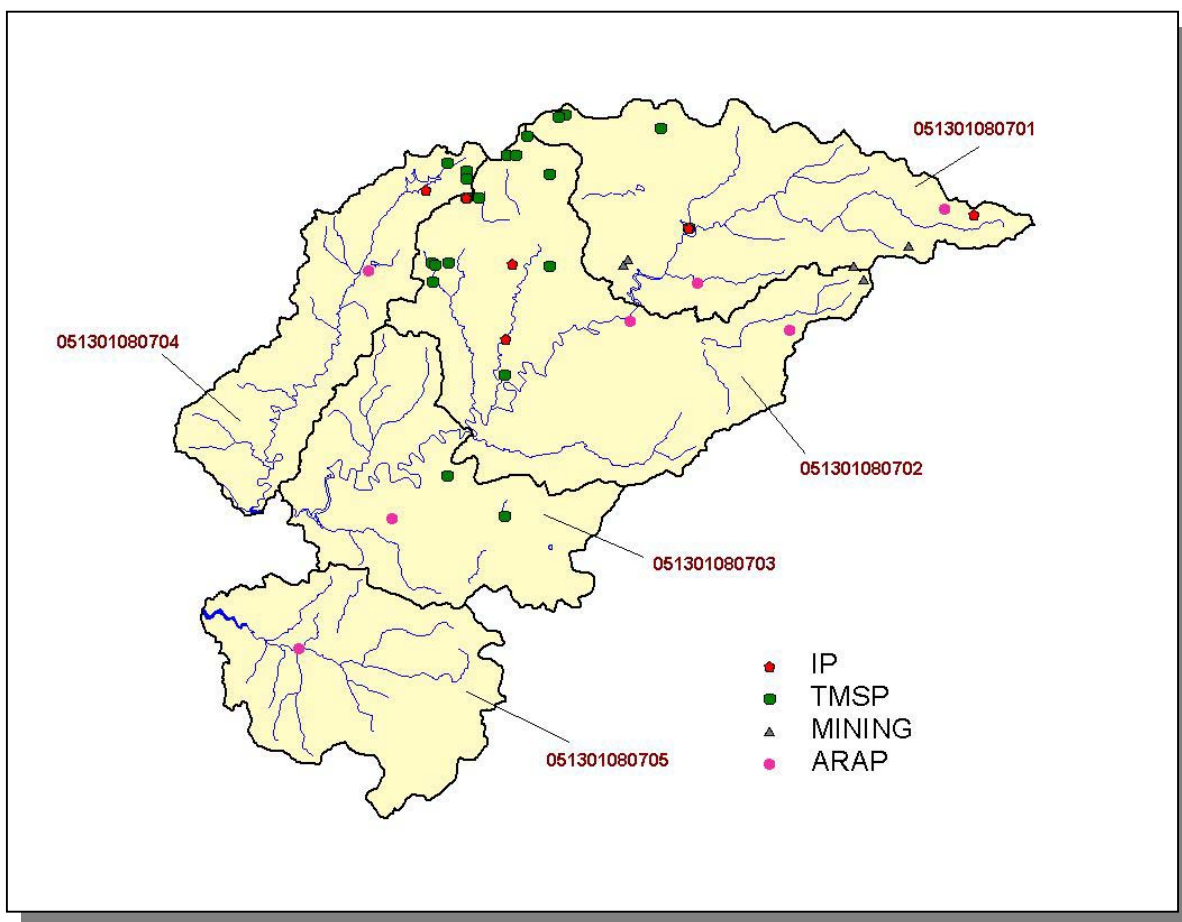


**Figure 4-66. Location of Historical Streamflow Data Collection Sites in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

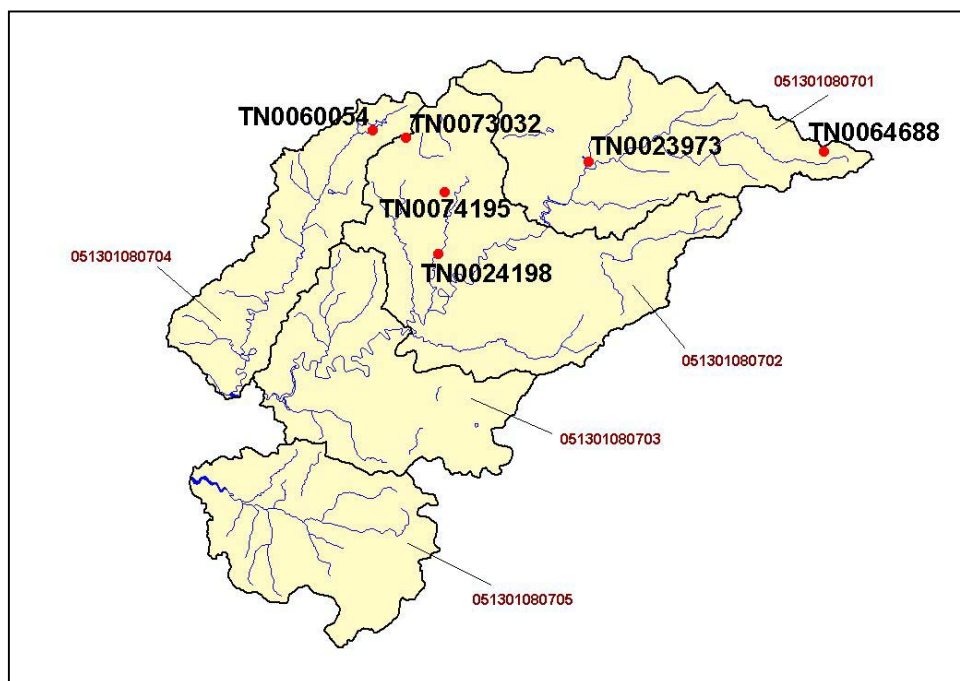


**Figure 4-67. Location of STORET Monitoring Sites in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

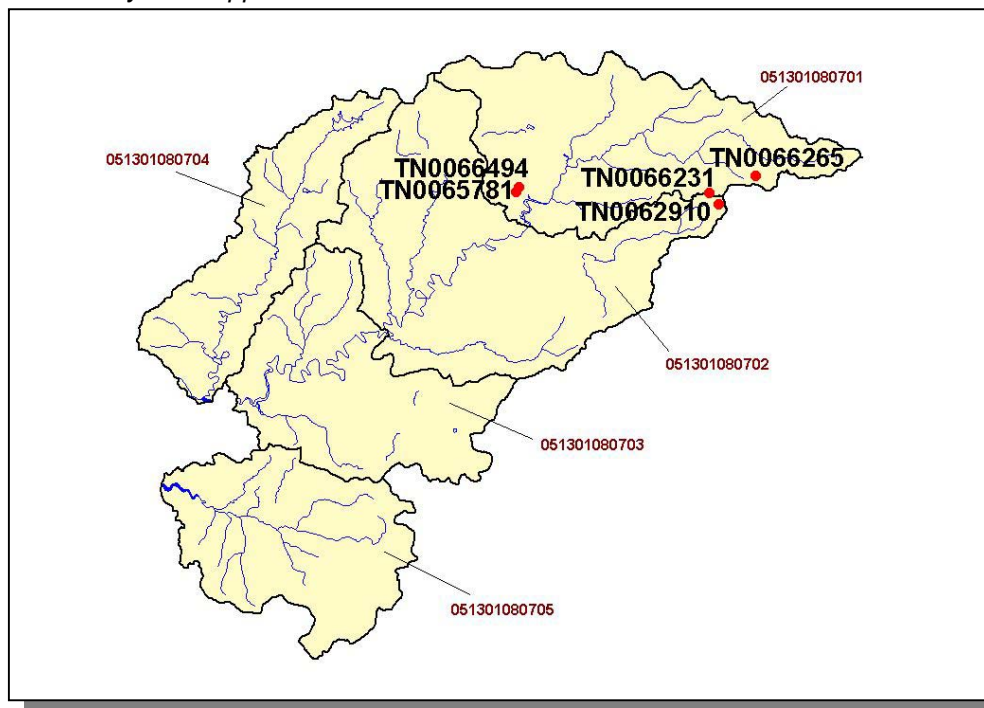
**4.2.G.ii.** Point Source Contributions.



**Figure 4-68. Location of Active Point Source Facilities in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. More information is provided in the following figures.

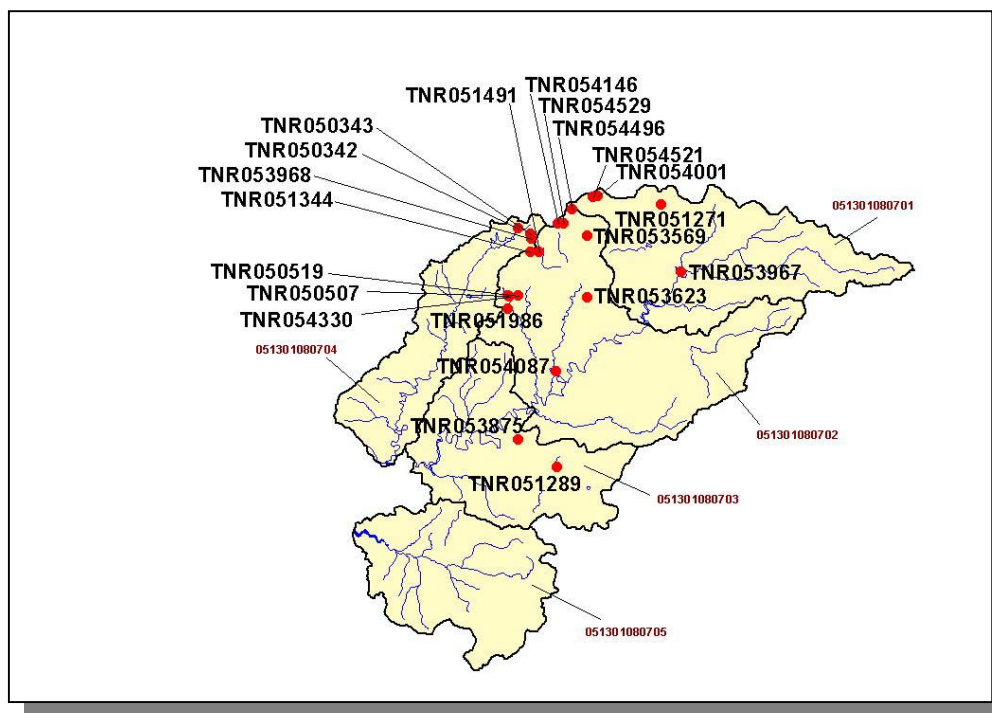


**Figure 4-69. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

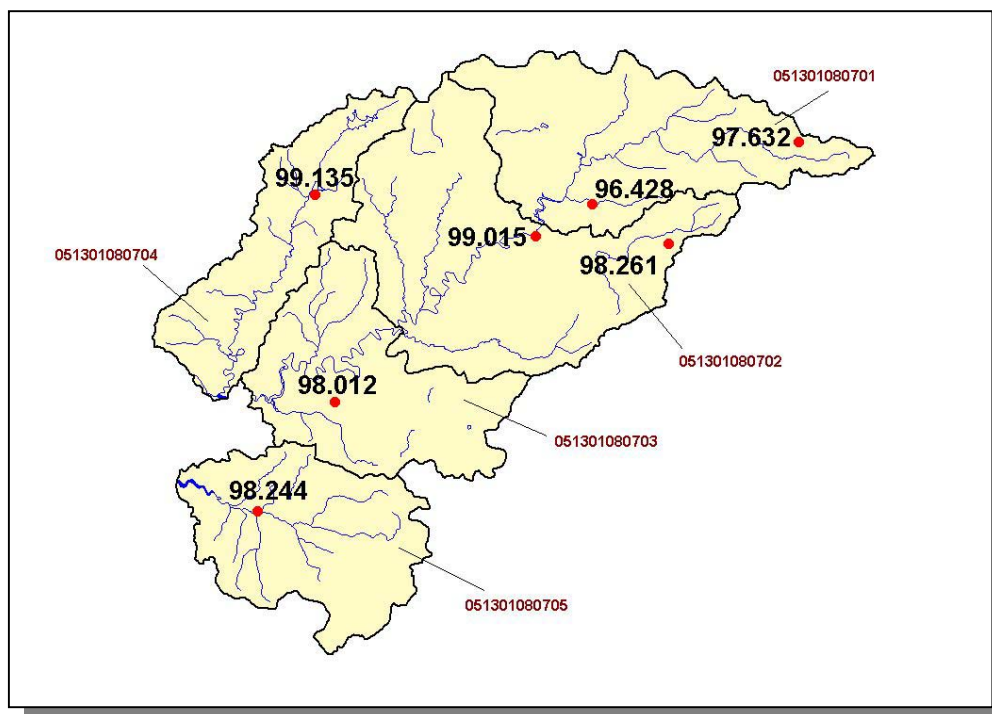


**Figure 4-70. Location of Active Mining Sites in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.





**Figure 4-71. Location of TMSP Facilities in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

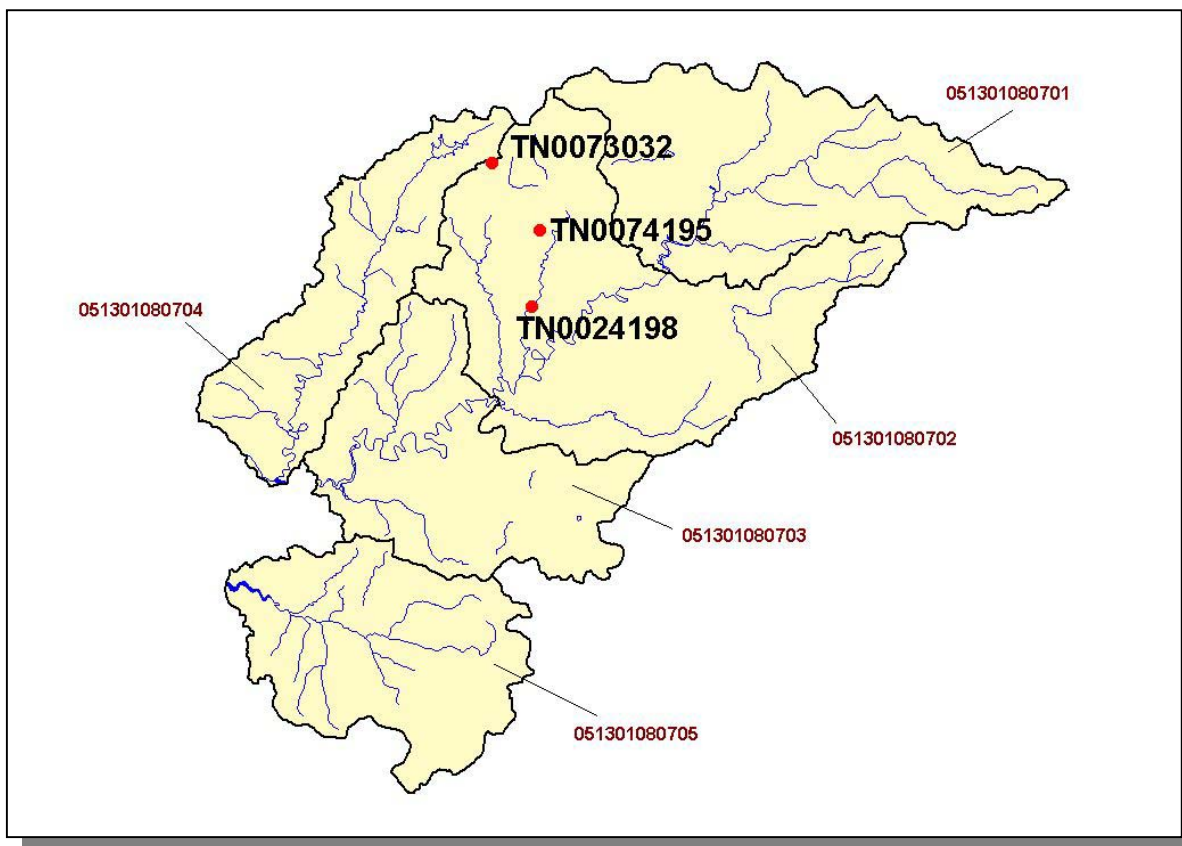


**Figure 4-72. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV

**4.2.G.ii.a. Dischargers to Water Bodies Listed on the 1998 303(d) List**

There are three NPDES facilities discharging to water bodies listed on the 1998 303(d) list in Subwatershed 0513010807:

- TN0024198 (Cookeville STP) discharges to Pigeon Roost Creek @ RM 2.3
- TN0073032 (Union Tools) discharges to a wet weather conveyance to Cane Creek @ RM 14.1
- TN0074195 (TDOT-Putnam County) discharges to an unnamed trib to Pigeon Roost Creek



**Figure 4-73. Location of NPDES Dischargers to Water Bodies Listed on the 1998 303(d) List in Subwatershed 0513010807.** Subwatershed 051301080701, 051301080702, 051301080703, 051301080704, and 051301080705 boundaries are shown for reference. The names of facilities are provided in Caney Fork-Appendix IV.

PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0024198	0.66	0.70	0.79	0.60	14.00000
TN0073032				0.32	0.14400
TN0021112				0.00	0.00432

**Table 4-41. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0513010807.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	P
TN0024198	X

**Table 4-42. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0513010807.**

PERMIT #	WET	CBOD <sub>5</sub>	FECAL	NH <sub>3</sub>	Pb	Hg	TRC	TSS	SETTLEABLE SOLIDS	CN	DO	pH
TN0024198	X	X	X	X		X	X	X	X	X	X	X
TN0073032								X				X
TN0074195	X				X			X				

**Table 4-43a. Inorganic Parameters Monitored for Daily Maximum (mg/L) Limits for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0513010807.** Wet, Whole Effluent Toxicity; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	OIL and GREASE	ETHYLBENZENE	BENZENE	TOLUENE	XYLENE
TN0074195	X	X	X	X	X

**Table 4-43b. Organic Parameters Monitored for Daily Maximum (mg/L) Limits for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0513010807.**

**4.2.G.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
9,185	18,798	1,210	21	0	769	46

**Table 4-44. Summary of Livestock Count Estimates in Subwatershed 0513010807.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

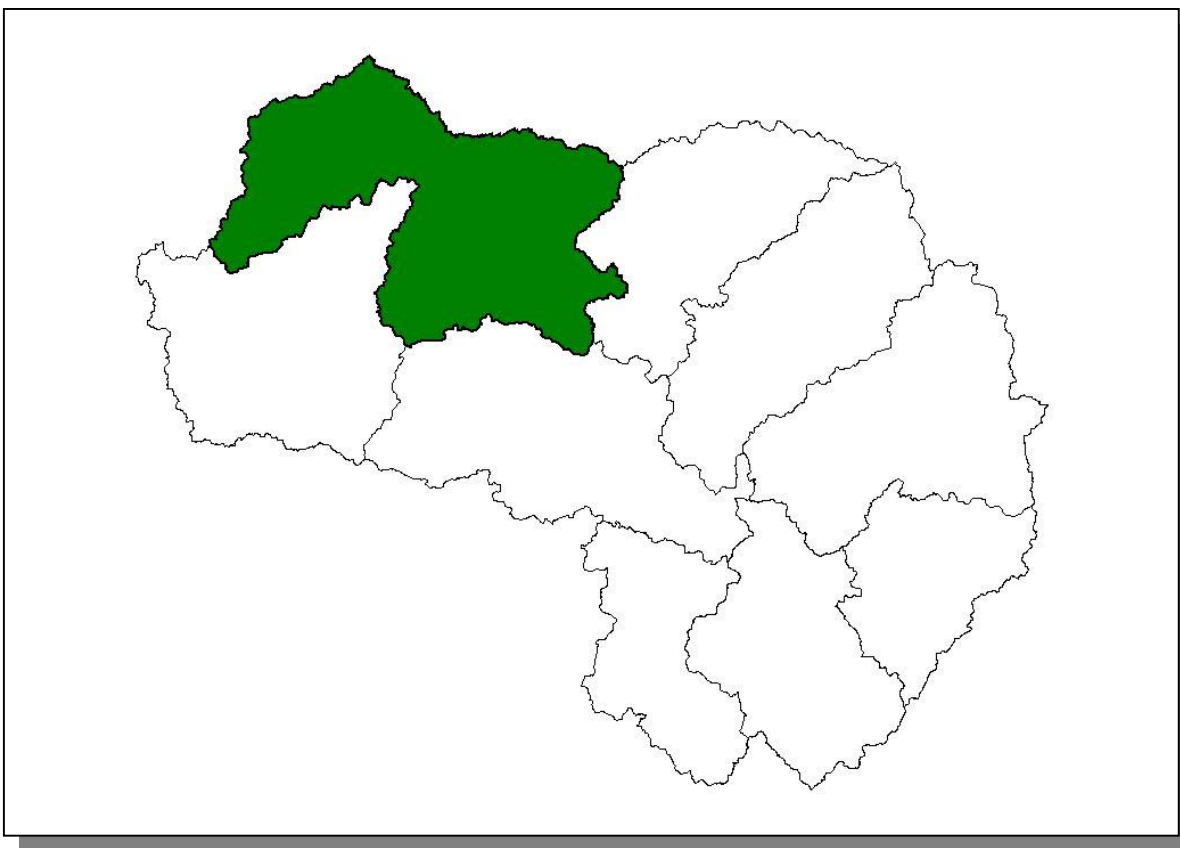
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Putnam	152.5	152.3	3.6	16.4
White	129.4	129.4	4.9	23.3
<b>Totals</b>	<b>281.9</b>	<b>281.7</b>	<b>8.5</b>	<b>39.7</b>

**Table 4-45. Forest Acreage and Average Removal Rates (1987-1994) in Subwatershed 0513010807.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legume (Hayland)	0.33
Legume/Grass (Hayland)	0.49
Grass (Pastureland)	1.35
Grass, Forbs, Legumes (Mixed Pasture)	0.75
Forest Land (Grazed)	0.00
Corn (Row Crops)	11.84
Soy Beans (Row Crops)	0.93
Conservation Reserve Program Land	0.13
Wheat (Close Grown Cropland)	6.10
All Other Close Grown Cropland	0.67
Other Land in Farms	0.25
Fruit (Horticulture)	0.08
Other (Horticulture)	1.13
Other Vegetable and Truck Crop	14.6
Other Cropland not Planted	2.26

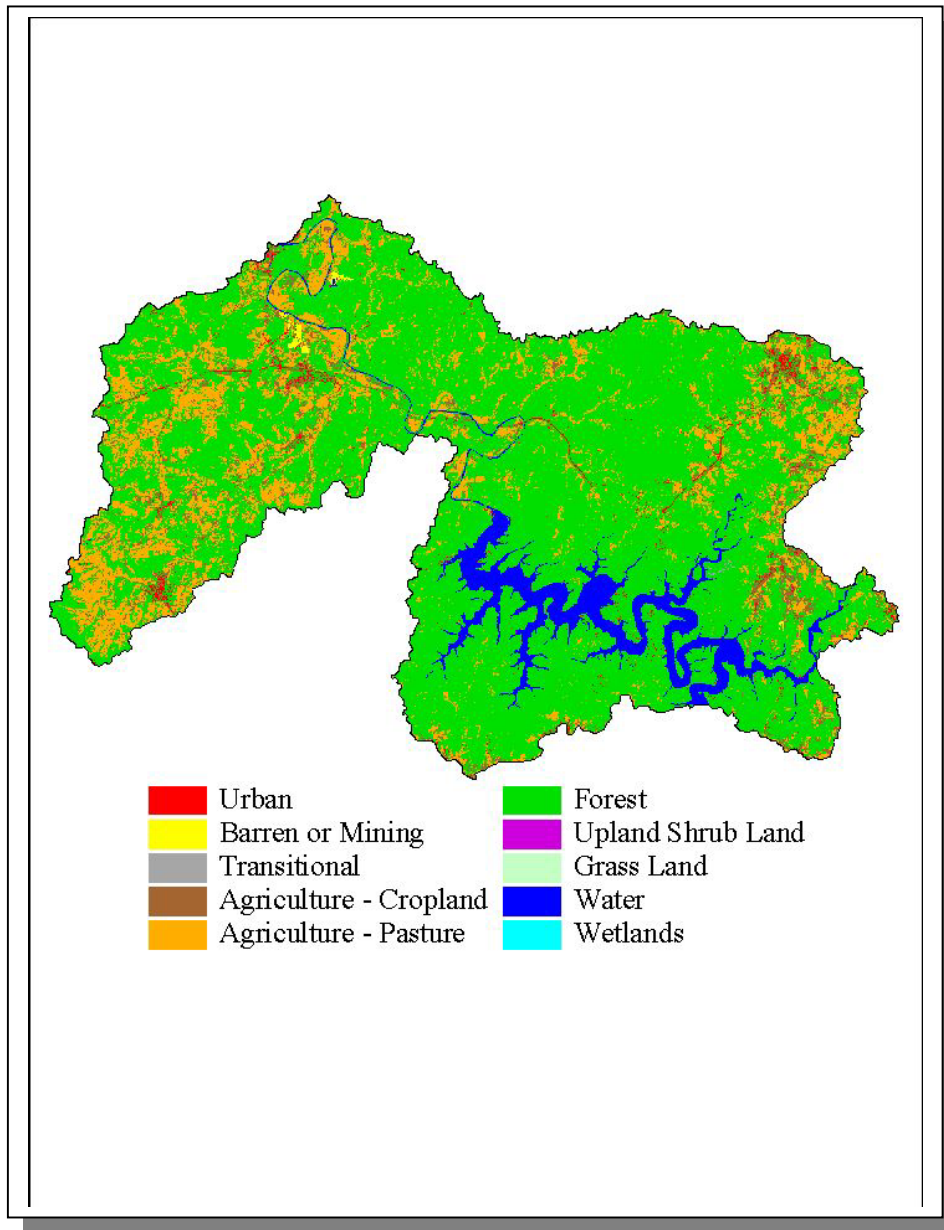
**Table 4-46. Annual Estimated Total Soil Loss in Subwatershed 0513010807.**

**4.2.H. 0513010808.**

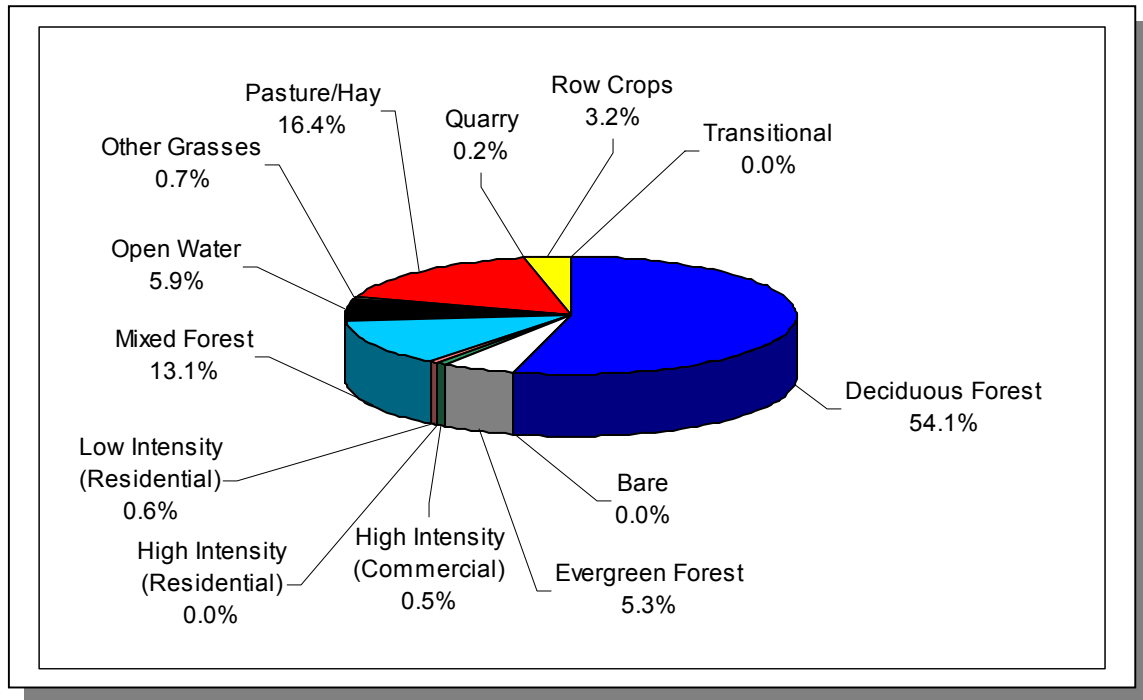


**Figure 4-74. Location of Subwatershed 0513010808.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.

4.2.H.i. General Description.

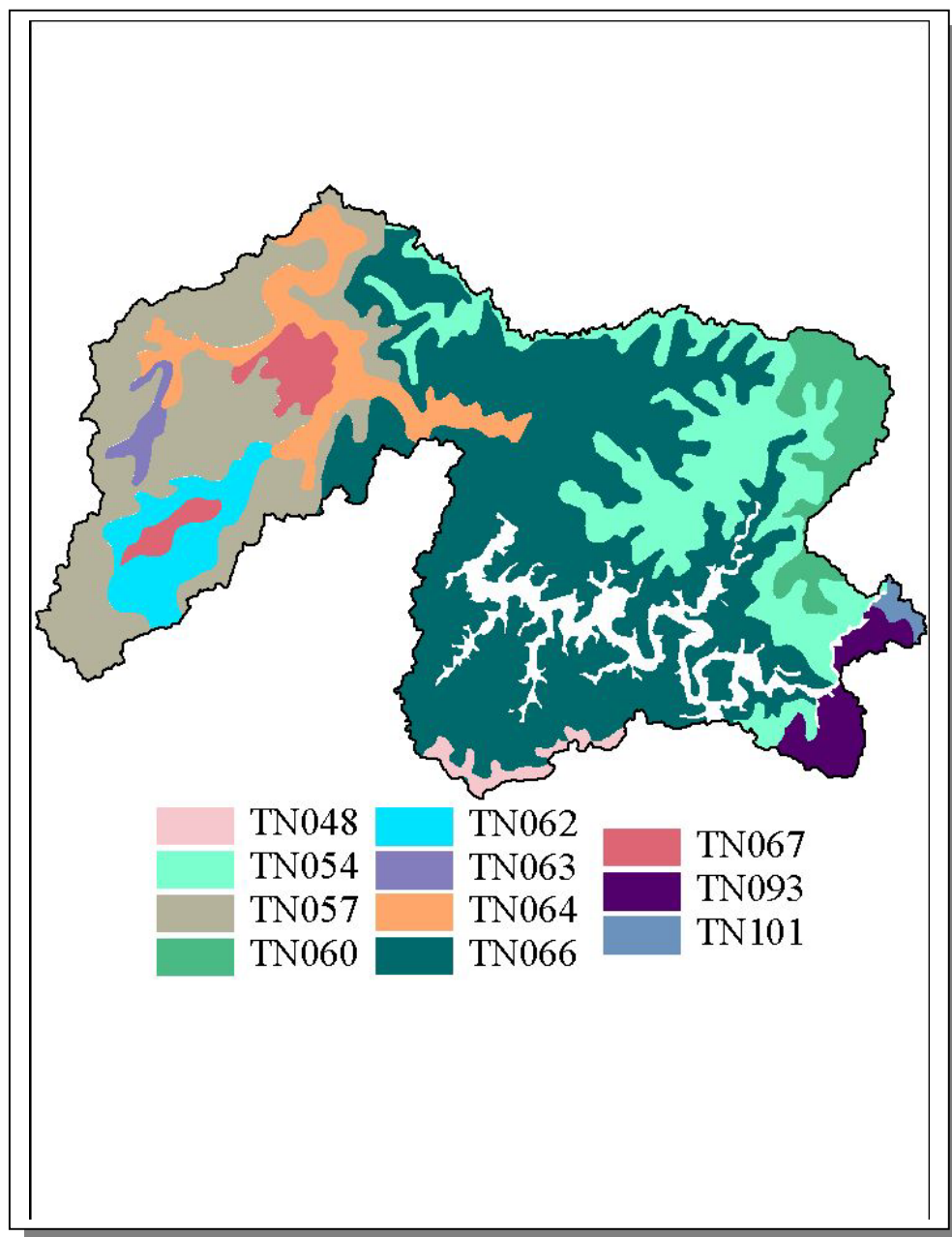


*Figure 4-75. Illustration of Land Use Distribution in Subwatershed 0513010808.*



**Figure 4-76. Land Use Distribution in Subwatershed 0513010808.** More information is provided in Caney Fork-Appendix IV.





**Figure 4-77. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010808.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN048	8.00	C	1.38	5.06	Silty Loam	0.42
TN054	0.00	C	3.04	4.84	Loam	0.32
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN063	0.00	C	1.19	5.72	Clayey Loam	0.32
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN093	0.00	B	2.43	4.95	Loam	0.36
TN101	0.00	B	1.71	5.39	Loam	0.35

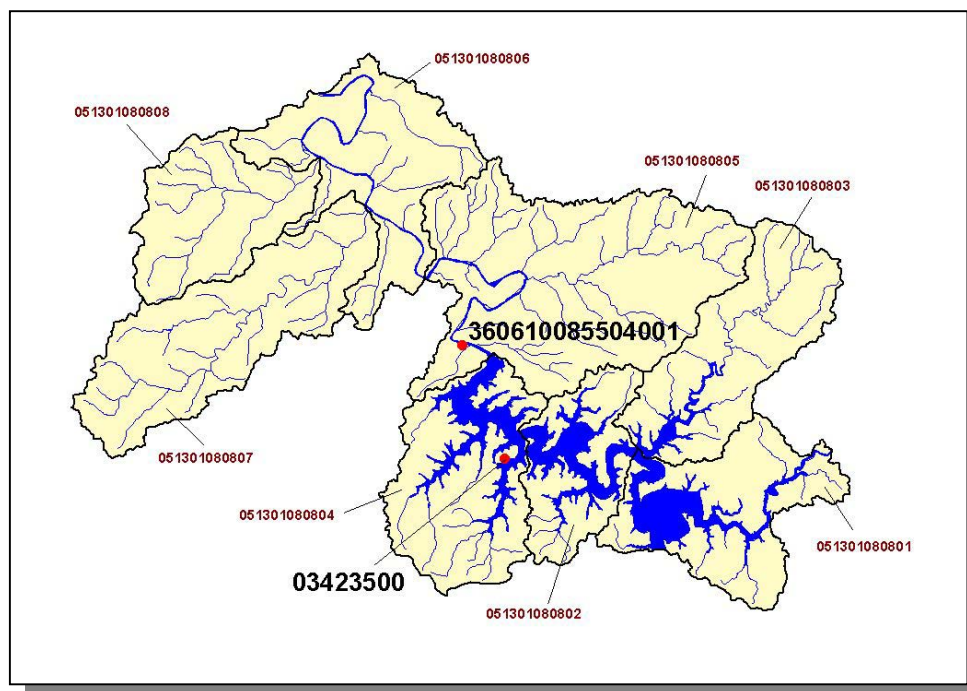
**Table 4-47. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010808.** More information is provided in Caney Fork-Appendix IV.

	COUNTY POPULATION			ESTIMATED POPULATION IN WATERSHED		% CHANGE
County	1990	1997 Est.	Portion of Watershed (%)	1990	1997	
DeKalb	14,360	15,743	33.1	4,754	5,212	9.6
Putnam	51,373	58,326	18.96	9,740	11,058	13.5
Smith	14,143	16,047	34.36	4,860	5,514	13.5
White	20,090	22,201	1.03	208	230	10.6
Wilson	67,675	81,327	1.75	1,181	1,420	20.2
<b>Totals</b>	<b>167,641</b>	<b>193,644</b>		<b>20,743</b>	<b>23,434</b>	<b>13.0</b>

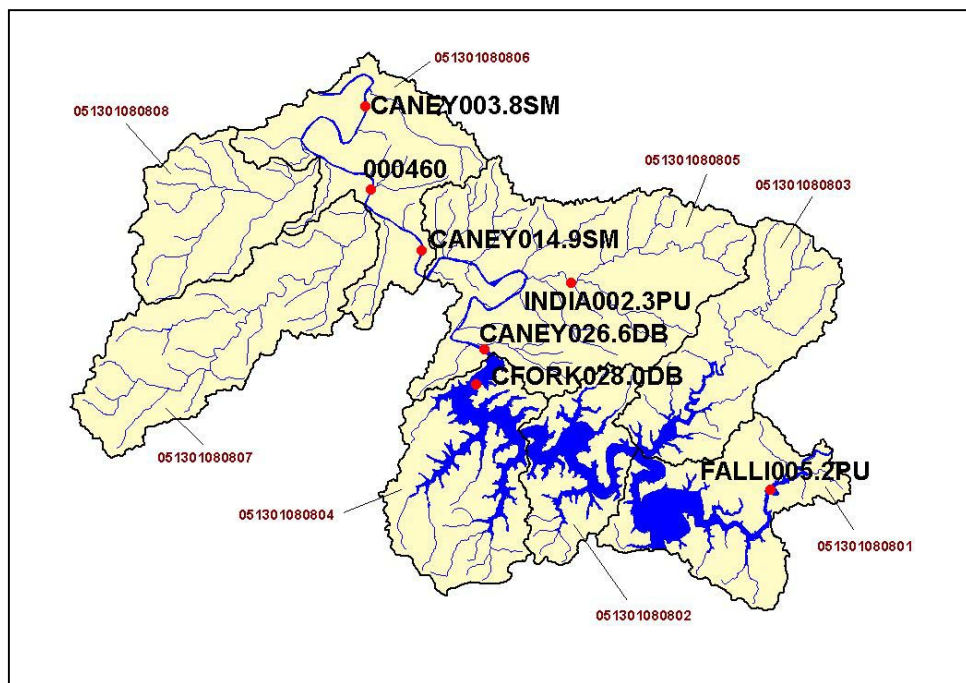
**Table 4-48. Population Estimates in Subwatershed 0513010808.**

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Gordonsville	Smith	891	372	14	356	2
South Carthage	Smith	851	376	295	81	0
Baxter	Putnam	1,289	579	424	153	2
Alexandria	DeKalb	740	346	325	20	1
Smithville	Dekalb	3,791	1,693	1,560	122	11
<b>Total</b>		<b>7,562</b>	<b>3,366</b>	<b>2,618</b>	<b>732</b>	<b>16</b>

**Table 4-49. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0513010808.**

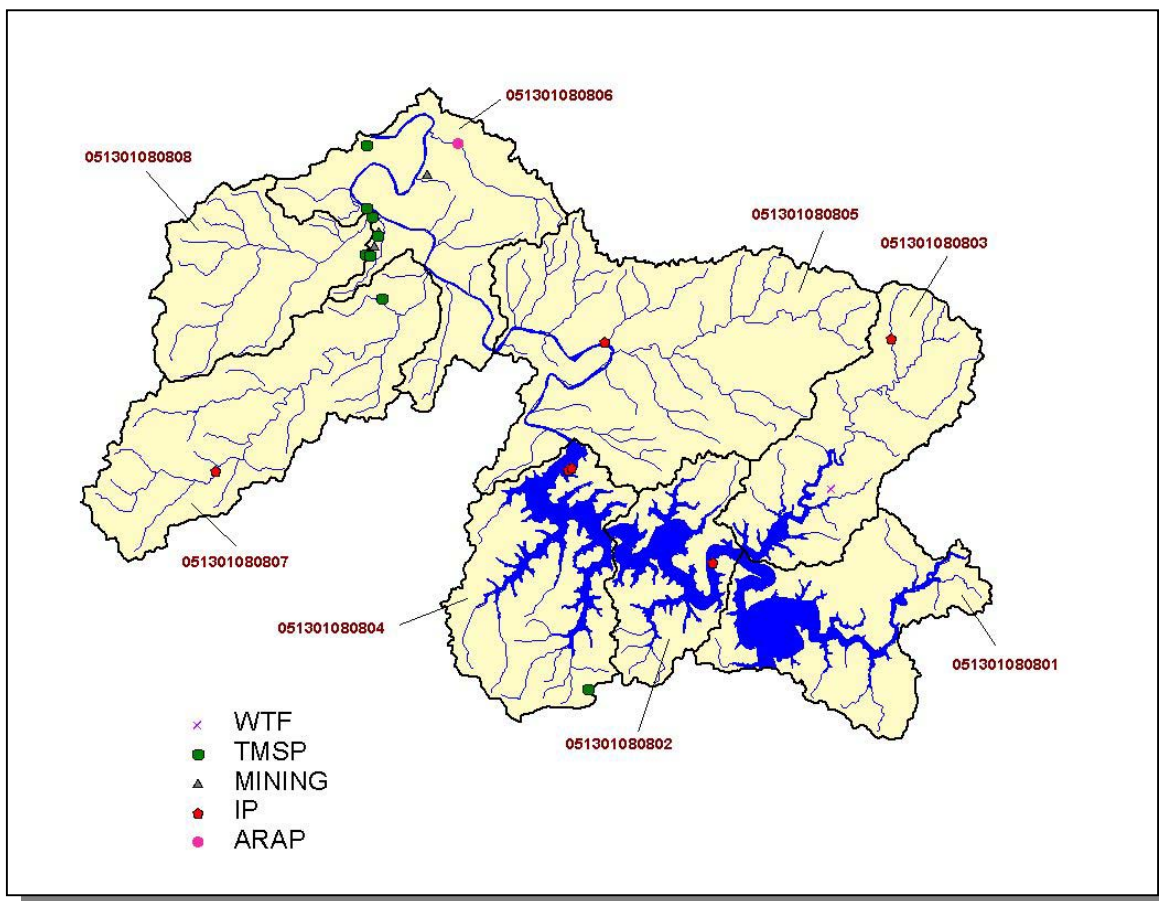


**Figure 4-78. Location of Historical Streamflow Data Collection Sites in Subwatershed 0513010808.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



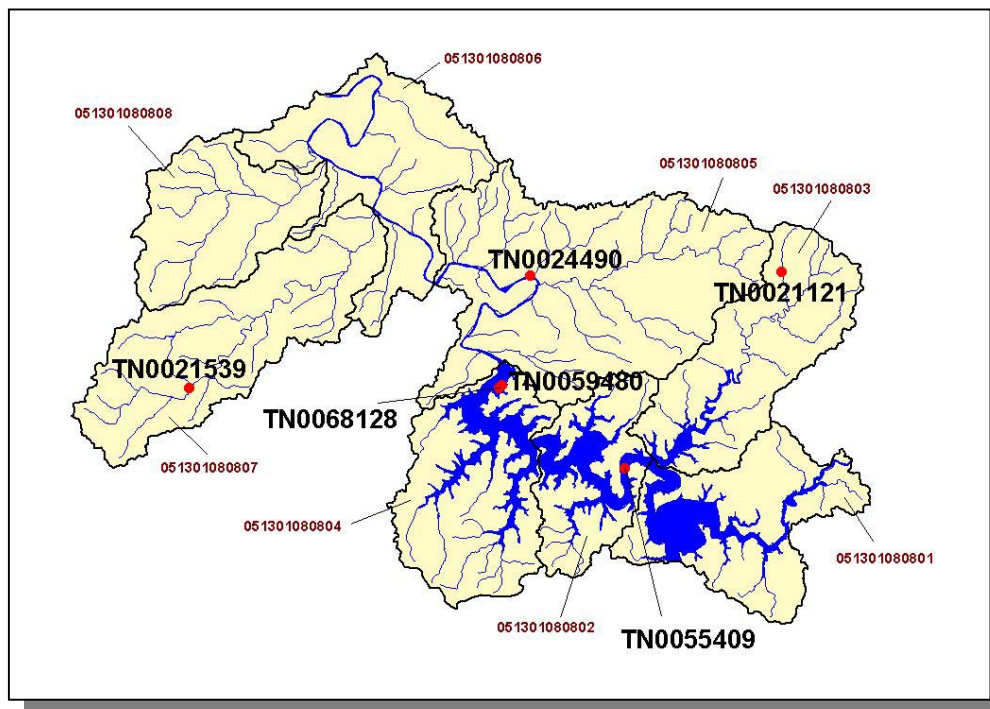
**Figure 4-79. Location of STORET Monitoring Sites in Subwatershed 0513010808.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

**4.2.H.ii.** Point Source Contributions.

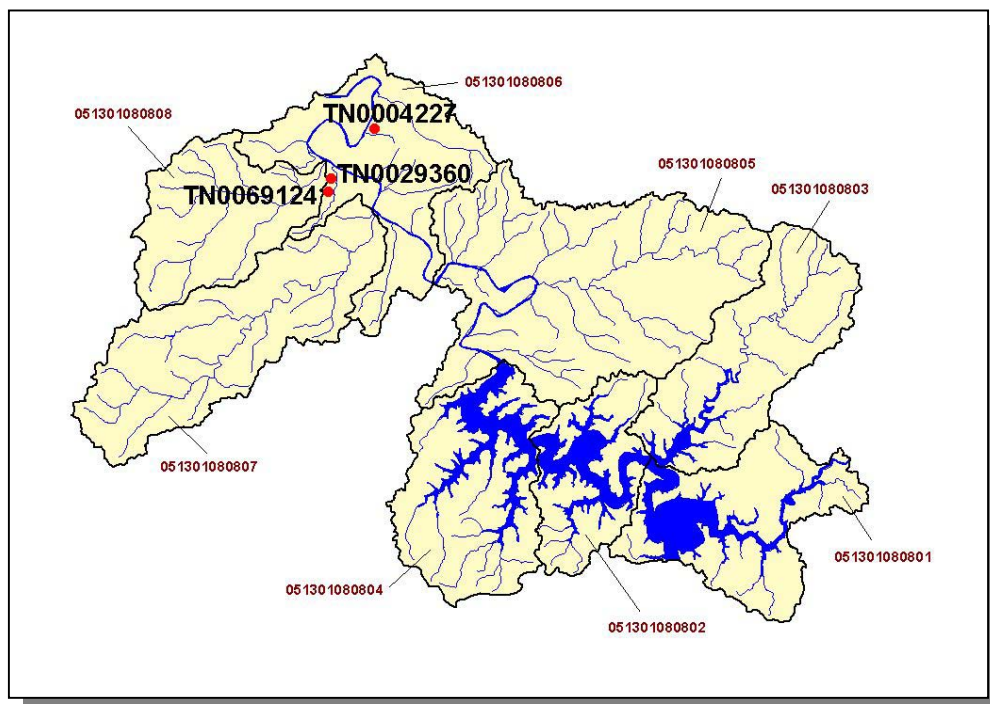


**Figure 4-80. Location of Active Point Source Facilities in Subwatershed 0513010808.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. Tennessee. More information is provided in the following figures.

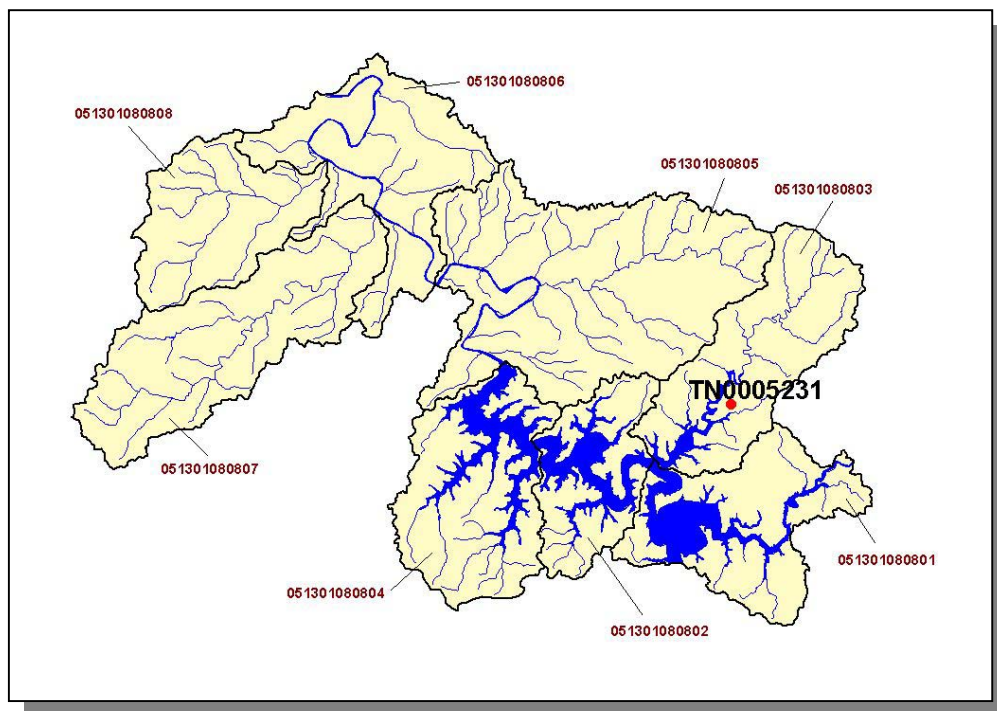




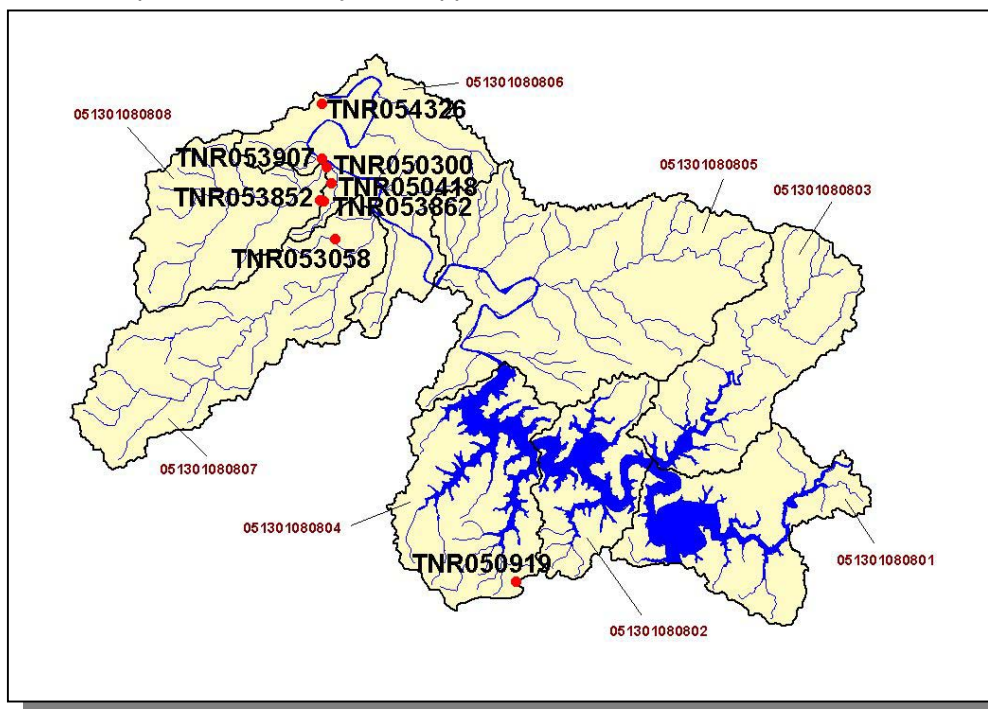
**Figure 4-81. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0513010808.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



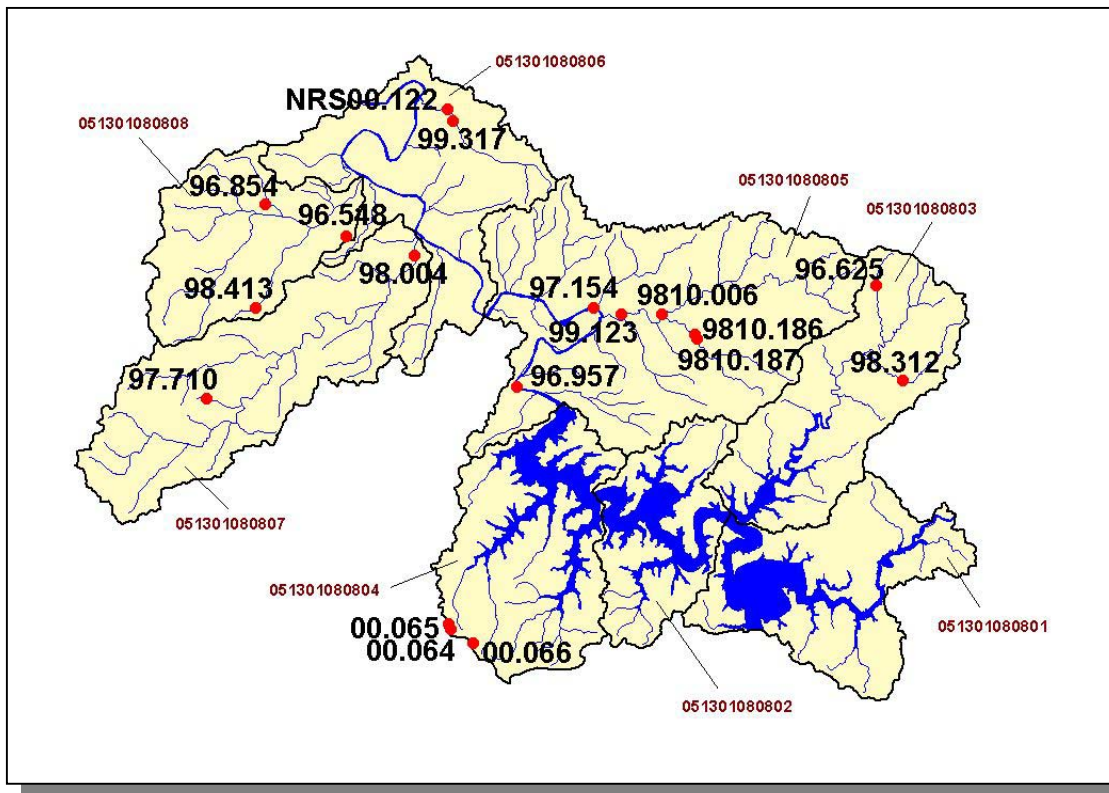
**Figure 4-82. Location of Active Mining Sites in Subwatershed 0513010807.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-83. Location of Water Treatment Plant Sites in Subwatershed 0513010808.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-84. Location of TMSP Facilities in Subwatershed 0513010808.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



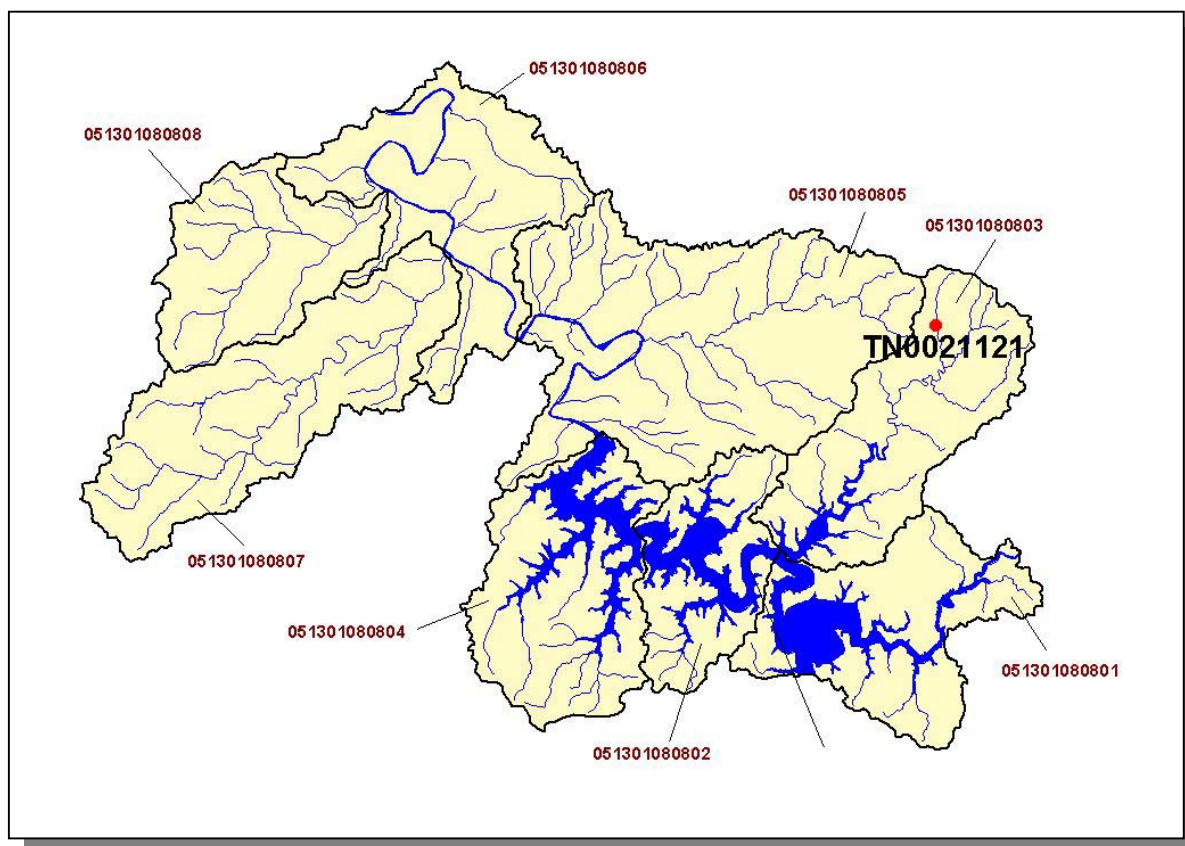
**Figure 4-85. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010808.** Subwatershed 051301080801, 051301080802, 051301080803, 051301080804, 051301080805, 051301080806, 051301080807, and 051301080808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**4.2.H.ii.a. Dischargers to Water Bodies Listed on the 1998 303(d) List**

There is one NPDES facility discharging to water bodies listed on the 1998 303(d) list in Subwatershed 0513010808:

- TN0021121 (Baxter STP) discharges to mine Lick Creek at RM 15.4



**Figure 4-86. Location of NPDES Dischargers to Water Bodies Listed on the 1998 303(d) List in Subwatershed 0513010808.** Subwatershed 0513010801, 0513010802, 0513010803, 0513010804, 0513010805, 0513010806, 0513010807, and 0513010808 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0021121			0.00		0.50000

**Table 4-50. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0513010808.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	P
TN0021121	X

**Table 4-51. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0513010808.**

PERMIT #	WET	CBOD <sub>5</sub>	FECAL	NH <sub>3</sub>	TRC	TSS	SETTLEABLE SOLIDS	DO	pH
TN0021121	X	X	X	X	X	X	X	X	X

**Table 4-52. Parameters Monitored for Daily Maximum (mg/L) Limits for NPDES Dischargers to Waterbodies Listed on the 1998 303(d) List in Subwatershed 0513010808.** WET, Whole Effluent Toxicity; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

**4.2.H.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
13,256	23,932	756	32	0	1,143	200

**Table 4-53. Summary of Livestock Count Estimates in Subwatershed 0513010808.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

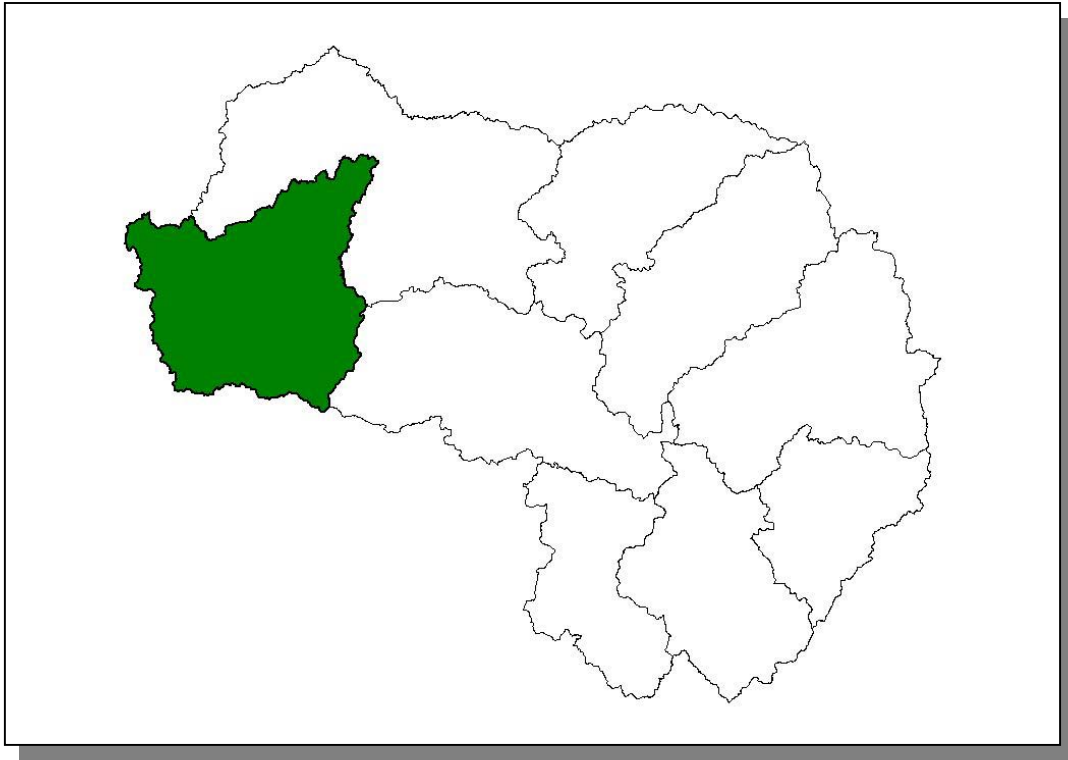
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Putnam	152.5	152.3	3.6	16.4
Smith	81.0	81.0	1.1	2.6
White	129.4	129.4	4.9	23.3
Wilson	98.1	97.0	1.7	6.8
<b>Totals</b>	<b>461.0</b>	<b>459.7</b>	<b>11.3</b>	<b>49.1</b>

**Table 4-54. Forest Acreage and Average Removal Rates (1987-1994) in Subwatershed 0513010808.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legume (Hayland)	0.40
Grass (Hayland)	0.75
Legume/Grass (Hayland)	0.42
Grass (Pastureland)	1.46
Grass, Forbs, Legumes (Mixed Pasture)	0.77
Forest Land (Grazed)	0.00
Forest (Not Grazed)	0.00
Corn (Row Crops)	2.32
Soy Beans (Row Crops)	3.76
Tobacco (Row Crops)	9.40
Conservation Reserve Program Land	0.21
Wheat (Close Grown Cropland)	5.53
All Other Close Grown Cropland	1.97
Fruit (Horticulture)	0.08
Other (Horticulture)	1.13
Other Vegetable and Truck Crop	14.60
Other Land in Farms	0.25
Other Cropland not Planted	1.87
Farmsteads and Ranch Headquarters	0.22
Nonagricultural Land Use	0.00

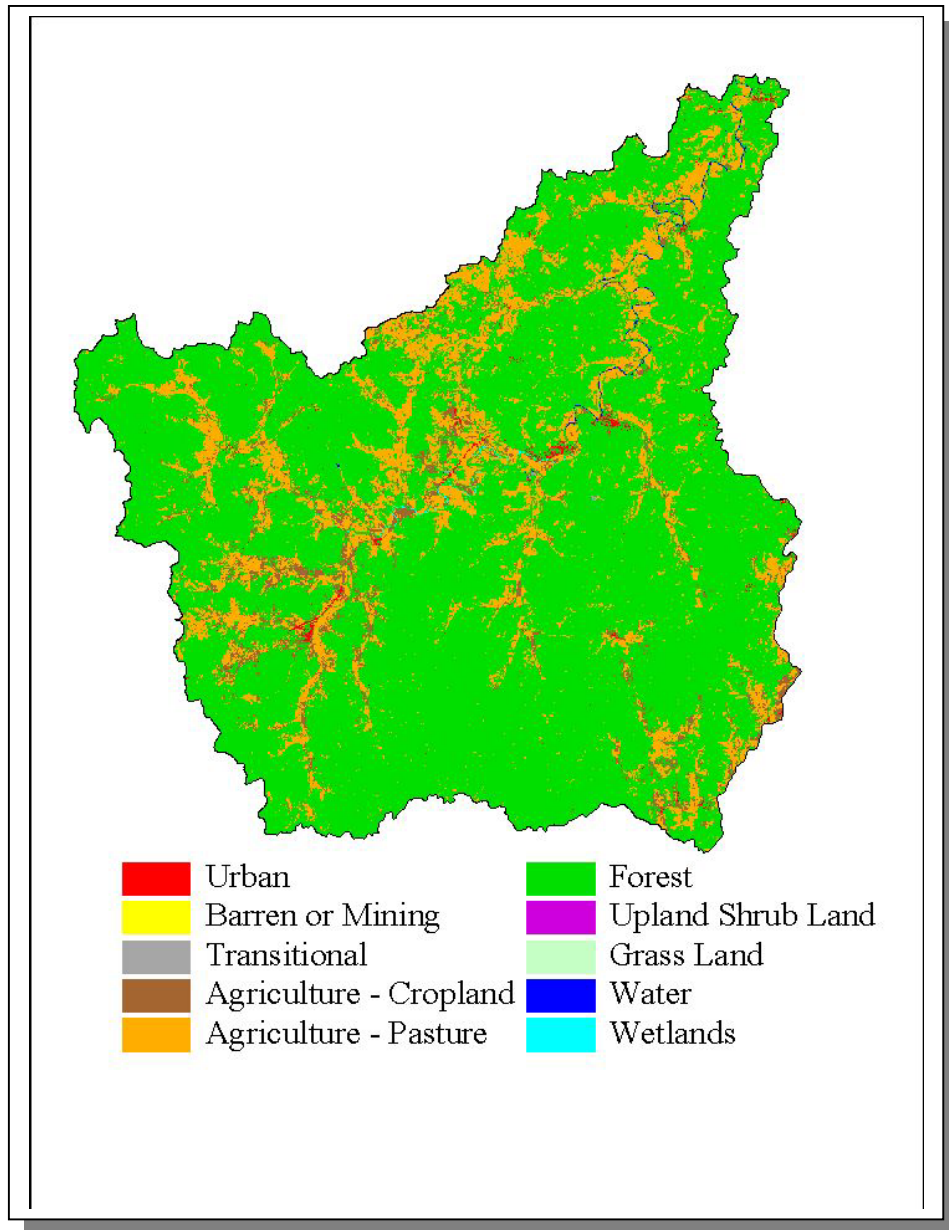
**Table 4-55. Annual Estimated Total Soil Loss in Subwatershed 0513010808.**

**4.2.I. 0513010809.**

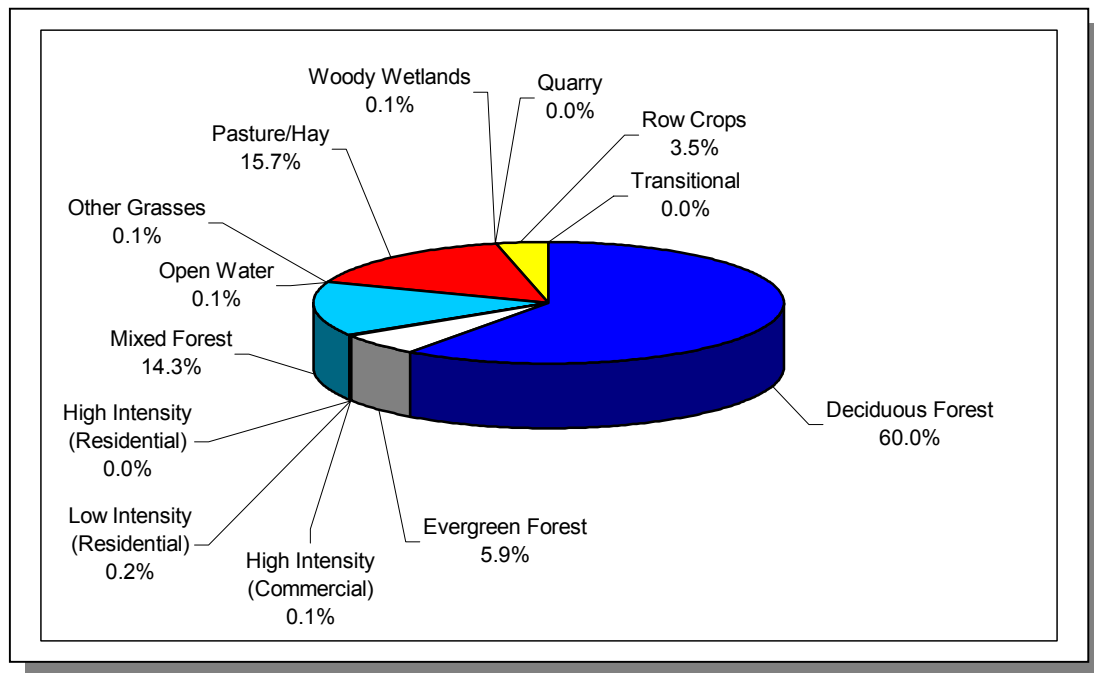


**Figure 4-87. Location of Subwatershed 0513010809.** All Caney Fork HUC-10 subwatershed boundaries are shown for reference.

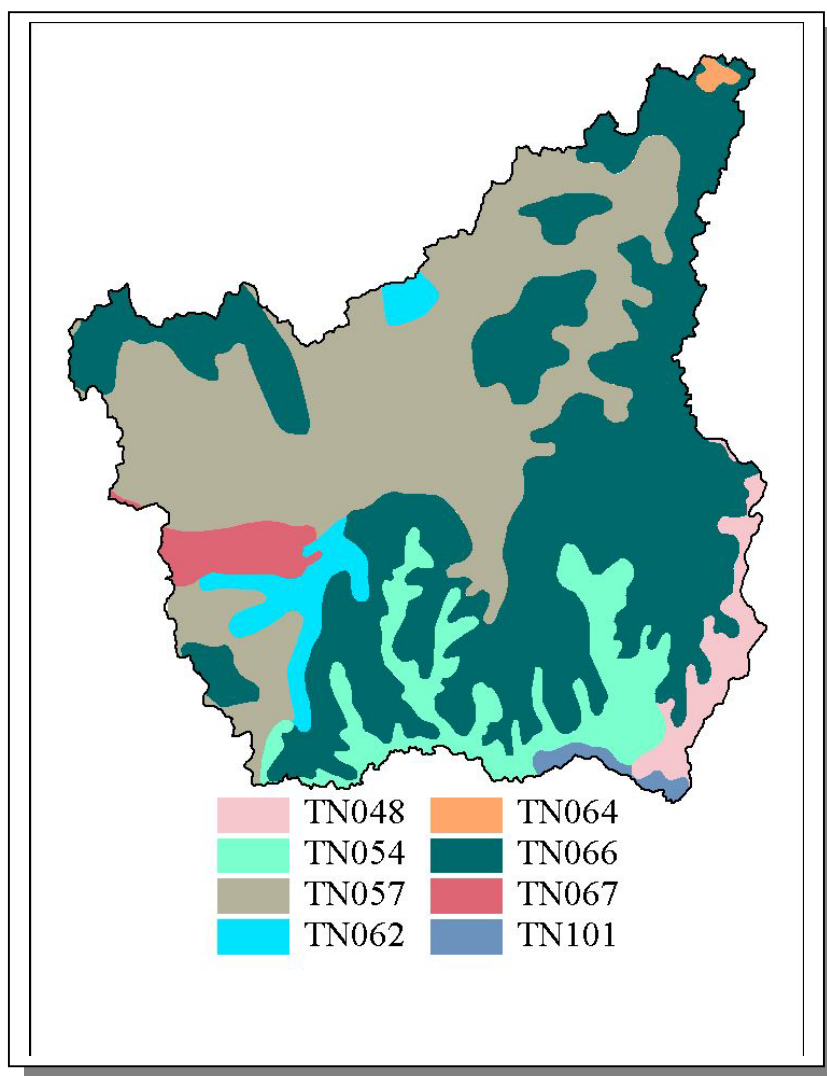
4.2.I.i. General Description.



*Figure 4-88. Illustration of Land Use Distribution in Subwatershed 0513010809.*



**Figure 4-89. Land Use Distribution in Subwatershed 0513010809.** More information is provided in Caney Fork-Appendix IV.



**Figure 4-90. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010809.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN048	8.00	C	1.38	5.06	Silty Loam	0.42
TN054	0.00	C	3.04	4.84	Loam	0.32
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN062	0.00	C	0.98	4.40	Clayey Loam	0.26
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28
TN067	2.00	C	2.69	5.51	Silty Loam	0.35
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-56. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0513010809.** More information is provided in Caney Fork-Appendix IV.

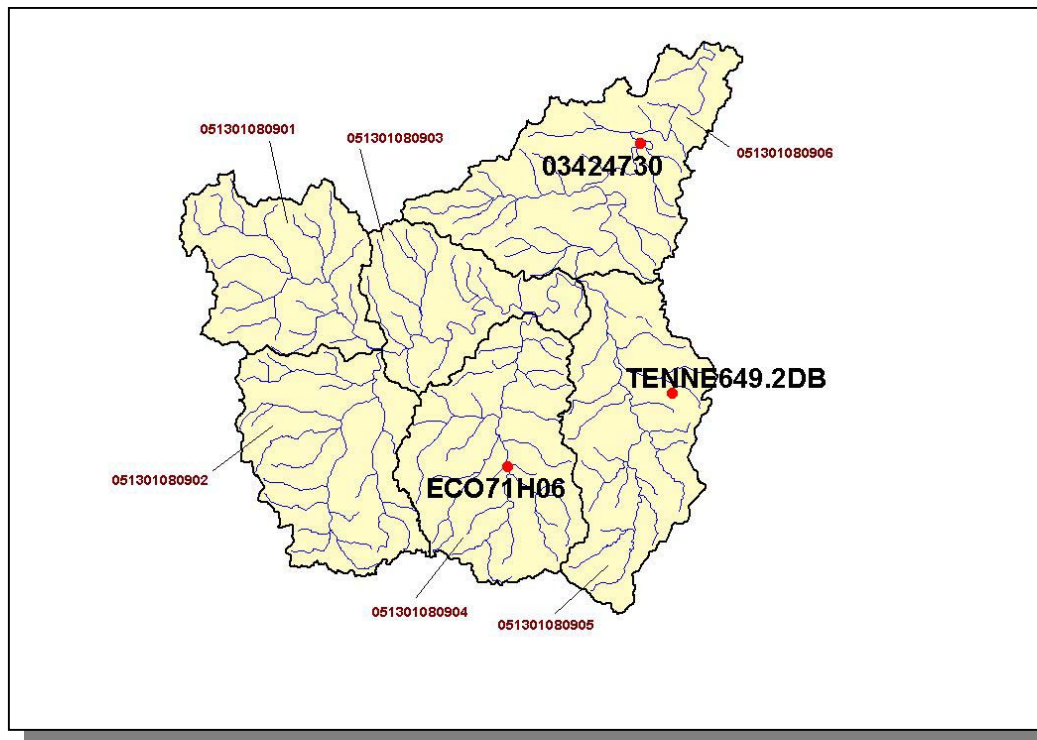


County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Cannon	10,467	12,011	26.31	2,754	3,160	14.7
DeKalb	14,360	15,743	30.82	4,426	4,852	9.6
Rutherford	118,570	159,987	0.17	201	272	35.3
Smith	14,143	16,047	1.75	247	280	13.4
Wilson	67,675	81,327	9.63	6,518	7,833	20.2
<b>Totals</b>	<b>225,215</b>	<b>285,115</b>		<b>14,146</b>	<b>16,397</b>	<b>15.9</b>

*Table 4-57. Population Estimates in Subwatershed 0513010808.*

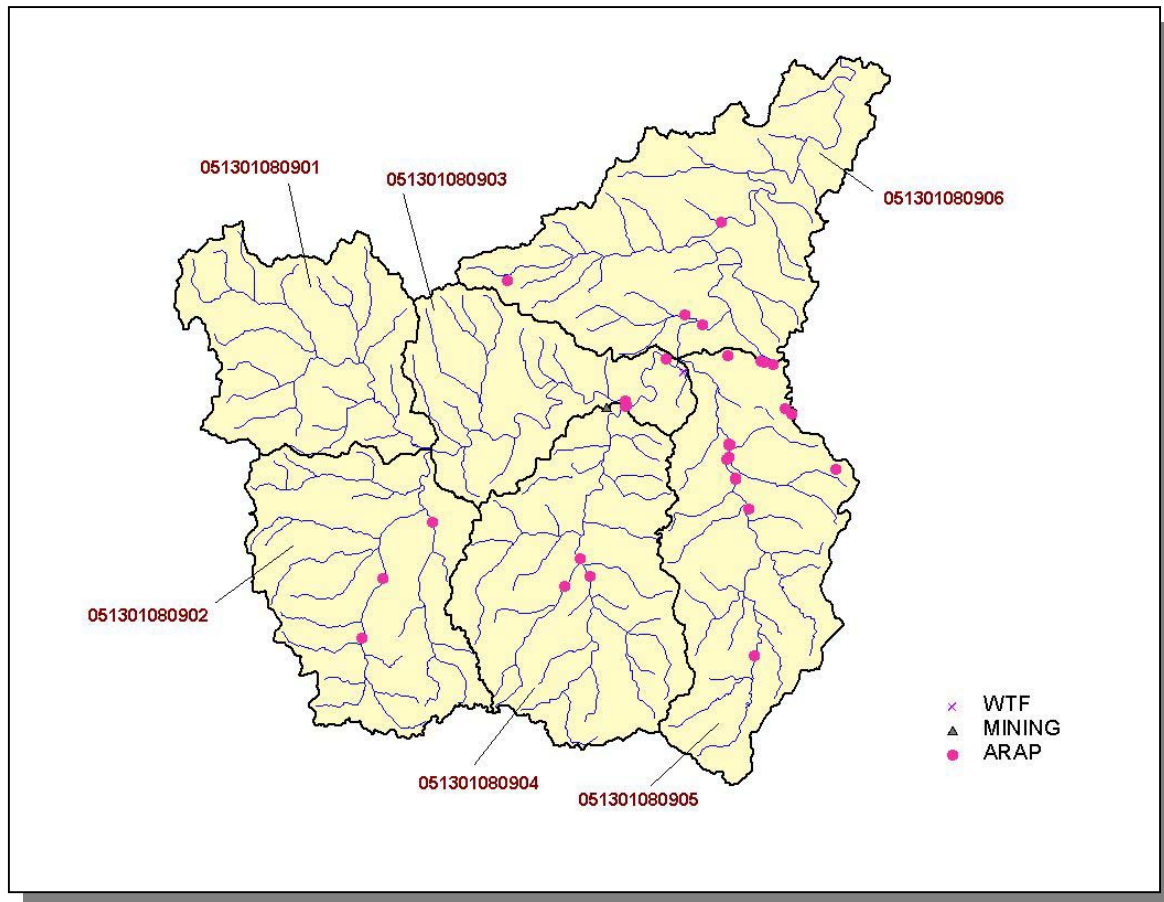
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Gordonsville	Smith	891	372	14	356	2
South Carthage	Smith	851	376	295	81	0
Baxter	Putnam	1,289	579	424	153	2
Alexandria	DeKalb	740	346	325	20	1
Smithville	Dekalb	3,791	1,693	1,560	122	11
<b>Total</b>		<b>7,562</b>	<b>3,366</b>	<b>2,618</b>	<b>732</b>	<b>16</b>

*Table 4-58. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0513010809*

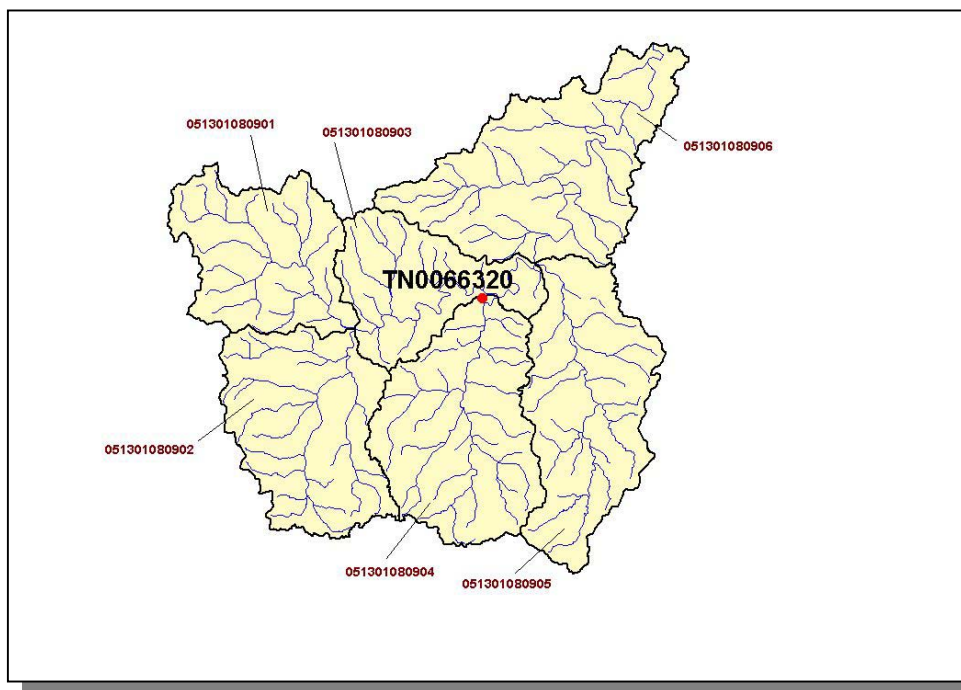


**Figure 4-91. Location of STORET Monitoring Sites in Subwatershed 0513010809.** Subwatershed 051301080901, 051301080902, 051301080903, 051301080904, 051301080905, and 051301080906 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

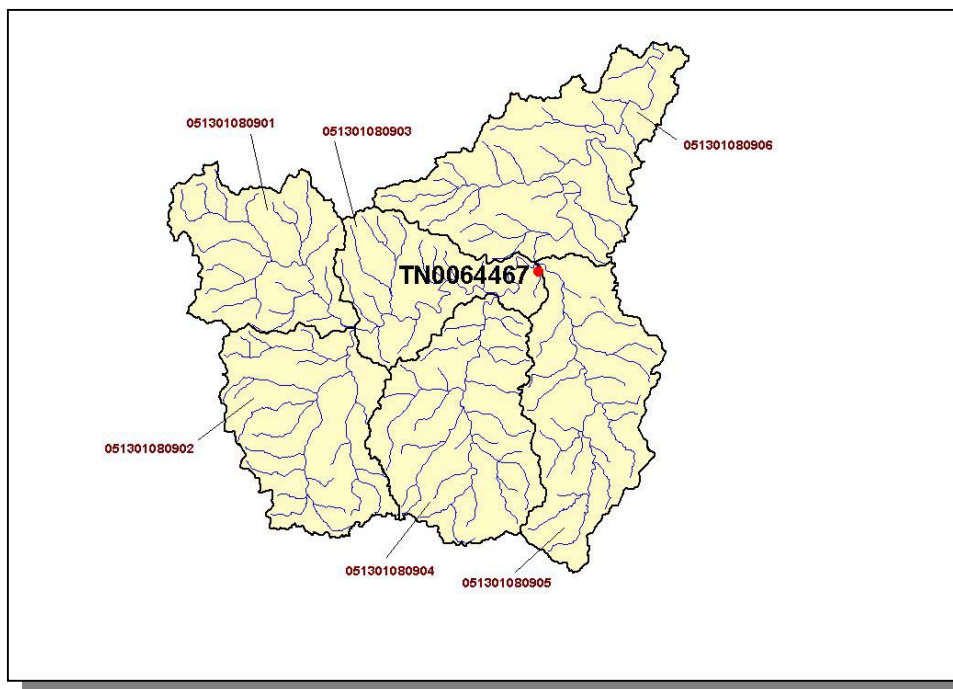
**4.2.I.ii.** Point Source Contributions.



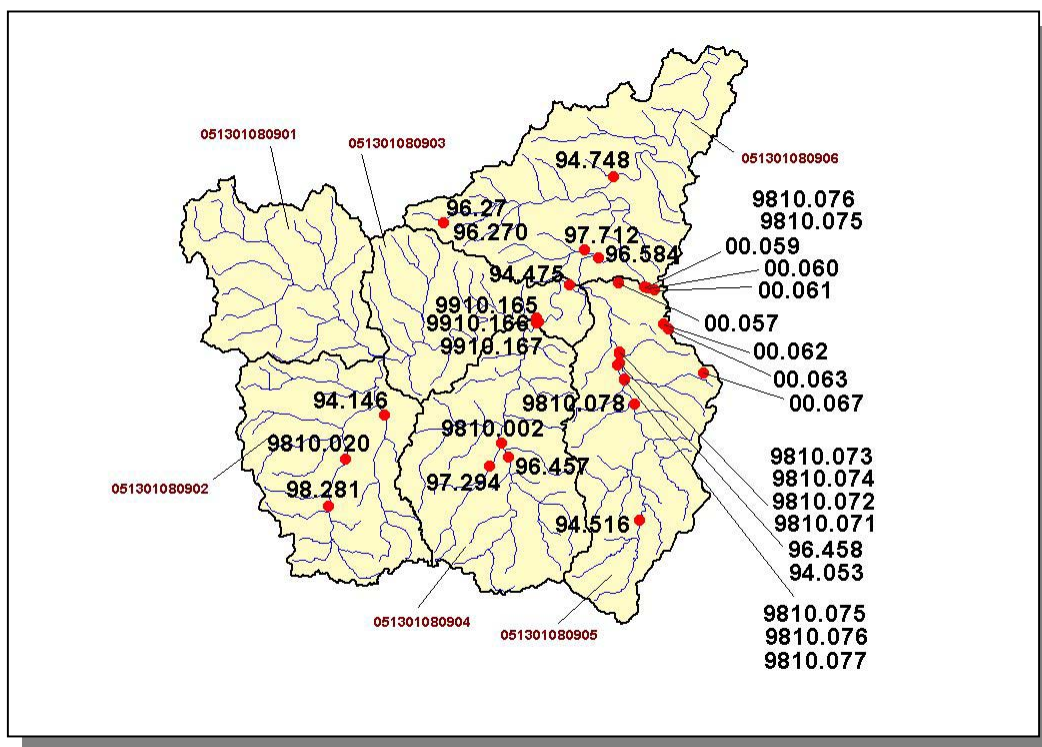
**Figure 4-92. Location of Active Point Source Facilities in Subwatershed 0513010809.** Subwatershed 051301080901, 051301080902, 051301080903, 051301080904, 051301080905, and 051301080906 boundaries are shown for reference. More information is provided in the following figures.



**Figure 4-93. Location of Active Mining Sites in Subwatershed 0513010809.** Subwatershed 051301080901, 051301080902, 051301080903, 051301080904, 051301080905, and 051301080906 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-94. Location of Water Treatment Plant Sites in Subwatershed 0513010809.** Subwatershed 051301080901, 051301080902, 051301080903, 051301080904, 051301080905, and 051301080906 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.



**Figure 4-95. Location of ARAP Sites (Individual Permits) in Subwatershed 0513010809.** Subwatershed 051301080901, 051301080902, 051301080903, 051301080904, 051301080905, and 051301080906 boundaries are shown for reference. More information is provided in Caney Fork-Appendix IV.

**4.2.I.iii.** Nonpoint Source Contributions.

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
9,712	18,337	582	25	0	849	127

**Table 4-59. Summary of Livestock Count Estimates in Subwatershed 0513010809.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cannon	88.5	88.5	1.7	7.1
Rutherford	155.7	155.7	0.4	0.9
Smith	81.0	81.0	1.1	2.6
Wilson	98.1	97.0	1.7	6.8
<b>Totals</b>	<b>423.3</b>	<b>422.2</b>	<b>4.9</b>	<b>17.4</b>

**Table 4-60. Forest Acreage and Average Removal Rates (1987-1994) in Subwatershed 0513010809.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legume (Hayland)	0.52
Grass (Hayland)	0.63
Legume/Grass (Hayland)	0.49
Grass (Pastureland)	0.81
Legume (Pastureland)	0.37
Grass, Forbs, Legumes (Mixed Pasture)	0.80
Forest Land (Grazed)	0.00
Forest (Not Grazed)	0.00
Corn (Row Crops)	3.75
Soy Beans (Row Crops)	3.07
Tobacco (Row Crops)	12.36
Cotton (Row Crops)	4.79
Conservation Reserve Program Land	0.21
Wheat (Close Grown Cropland)	4.11
All Other Close Grown Cropland	2.49
Berry (Horticulture)	0.47
Other (Horticulture)	1.13
Other Cropland not Planted	1.86
Farmsteads and Ranch Headquarters	0.40
Nonagricultural Land Use	0.00

**Table 4-61. Annual Estimated Total Soil Loss in Subwatershed 0513010809.**